

# Metamaterial Magic

## Keir Little interviews Professor John Pendry



8

# iScience

## Coming soon: Imperial's Science Magazine

37

# FELIX

"Keep the Cat Free"

29/11/13  
Issue 1562  
felixonline.co.uk



# Imperial Lobbies Lords For Our International Students

Marissa Lewis  
Wellbeing Editor

**T**he Immigration Bill was announced on October 10, 2013 and is currently moving through Parliament and it is due to have one final reading in the House of Commons before moving on to the House of Lords in the new year. A survey was put to international students earlier this month to canvas opinion on these issues, and the results of this survey were used to form a paper presented to Union Council by Marissa Lewis, Deputy President (Welfare) on November 12. It was passed unanimously, meaning the Union's stance on this issue is clear: we oppose any policy that would adversely affect our international students.

There are two proposals in the Immigration Bill in particular which affect international students – the first is the introduction of an NHS fee of up to £200 per year of study, paid before entry into the country. For doctoral research students with families, this could add up to £3000 to their costs of studying in the UK. Although there is a persistent stereotype that all international students are rich, 51% of students claimed it would be a financial struggle to pay this levy.

The second proposal is introducing a fine to any private landlord who doesn't check the immigration status of their tenants, raising fears that landlords would simply refuse to rent to international students to save them the time and bother. With 29% of international students already saying their fee status makes it difficult to rent accommodation, this change may further restrict access to safe, high quality housing.

One of the most shocking findings of the survey was that the proposed changes would have discouraged 60% of international students



From Left to Right: Lord Winston, Lord Darzi of Denham, Baroness Manningham-Buller, Lord May of Oxford, Lord Vincent of Coleshill and Lord Oxburgh

from applying to Imperial College London. In the face of an increasingly competitive global market for higher education, the changes could be catastrophic to Imperial as we rely on international students and staff to maintain our status as one of the top universities in the world.

Since passing through Council, the successful paper has been making its way through College. Marissa Lewis, Deputy President (Welfare) presented the paper to the Vice Provost's Advisory Group (Education) and, as a result, has gained the support of Professor Denis Wright, Director of Student Support and Sharon

Bolton, Head of International Student Support. Professor Debra Humphries, Vice Provost (Education) is also including the text of the paper in her regular report to the Provost Board taking place today.

The Union is joining with the national campaign of students' unions from across the UK to call on Parliament to allow international students to be exempted from these proposals. The next step being taken is to lobby the House of Lords, where the Bill will next be debated. The Union is calling for students to add their voices to an open letter to the members of the House of Lords (pictured) who

have ties with Imperial. Students can also support the National Union of Students' campaign by signing their petition and writing to their local MP using an online form.

Whether you are an international student or someone who recognises that international students provide our College with a wealth of talent and diversity that we should be protecting, you can find out details of how to get involved with the campaign here:

[imperialcollegeunion.org/immigrationbill](http://imperialcollegeunion.org/immigrationbill)

## THIS ISSUE...

### FASHION



FashionSoc on London Fashion Week **13**

### BOOKS



Part 2 of Raw Wards – a short story **17**

### FOOD



Felix visits a food festival! **40**

# EDITOR'S PICKS

## GAMES

### Console killers

5 Things Consoles are killing.



## BOOKS

### Short Story

Part Two of Eoghan Totten's short story, "Raw Words"



## FILM

### The Oscars

Film Editor John Park makes predictions about the Oscars 2014 Best Picture



## Erratum

Last week we printed the wrong version of an article in the Food section. We would like to apologise to the subject of the article, the correct version has been uploaded to the website.

# Next week's issue is the last issue of term!

Ahhh! What to do?

Don't worry, we'll still be active over the **Christmas holidays** on our **social website** and via **media!**

There's still time to **get involved** **this term,** simply **send an email** to one of the **editors** and they'll **be in touch!**



LOLCAT OF THE WEEK: More from teh Lolcat editor



THIS WEEK **FELIX** WAS BROUGHT TO YOU BY

Felix, Beit Quad, Prince Consort Road, London SW7 2BB.  
Email: felix@imperial.ac.uk. Tel: 020 7594 8072. Fax: 020 7594 8065.  
Printed by Iliffe Print Cambridge, Winship Road, Cambridge.  
Registered newspaper ISSN 1040-0711.  
Copyright © Felix 2013.

**Editor-in-Chief** Joe Letts **News Editors** Nida Mahmud, Philippa Skett, Aemun Reza **Features Editor** Shiladitya Ghosh **Wellbeing Editor** Marissa Lewis **Business Editor** James Tsim **Science Editors** Philippa Skett, Keir Little, Fiona Hartley **Politics Editor** Kartikeya Rana, Jash Rughani **Food Editors** Carol Ann Cheah, Michael Chung **Comment Editors** Eoghan J. Totten, Tessa Davey **Arts Editor** Arianna Sorba **Fashion Editor** Cécile Borkhataria **Books Editors** Maciej Matuszewski, Eva Rosenthal **Music Editors** Simon Hunter, Riaz Agahi, Stuart Masson, William Stocker **Television Editors** John Park, Emily Fulham **Film Editor** John Park **Games Editors** Maximilian Eggel, Calum Skene, Imran Rashid **Technology Editors** Maximilian Eggel, Yong Wen Chua, Osama Arawa, **Clubs & Socs Editor** Nida Mahmud **Charity Editor** Ben Fernando **Travel Editor** Chris Richardson **Sports Editor** Kunal Wagle **Online Editors** Philip Kent, Annina Sartor, Stephen Ball **Puzzles Commanders** Kingshuk Dasadhikari, Oliver Price **Copycats** Stephen Ball and Annina Sartor **Copykittens** Alexandra Hamilton, Tom Rivlin, Iulia Gherman, Tom Heaven, Mattin Mir-Tahmasebi **Felix Furniture** Jonathan Pratt



Editors: **Aemun Reza,**  
**Nida Mahmud,**  
**Philippa Skett**  
news.felix@imperial.ac.uk

NEWS

Union releases  
12/13AnnualReport

Joseph Letts  
Editor-in-Chief

This Tuesday the Union released their most recent annual report, covering last year's activities. There have been some changes in the Union's financial reporting methods, after the recent change to full charity status it now has to present financial statements according to the Charities SORP (Statement of Recommended Practice). The SORP requires a charity to not only present its finances, but also to do it in such a way that shows how financial transactions relate to their charitable activities.

The Union's charitable activities fall into three categories, Social Enterprise, Student Activities & Development, and Student Voice. Social Enterprise incorporates the activities of the Union's "licenced trade, retail outlets and the hiring of space", which includes the bars run by the Union (on the South Kensington Campus) and the Union Shop and Gift Shop on campus.

Student Activities & Development, however, encapsulates all the activities relating to student volunteering and Clubs, Societies and Projects (CSPs). Meanwhile, the Student Voice category accounts for campaigning, representing student views and various other student-related democratic activities.

As a part of the changes to the accounting practices used to present the Union's accounts (after gaining charity status), they now have to report the value of goods and services provided for Union use free of charge. This includes the provision of building space and IT services by College.

Over the 2012-13 period, the Union (via CSPs) paid over £40,000 in affiliation fees to external bodies, including £20,096.82 to 'British Universities & Colleges Sport' (BUCS) and £5111.28 to Denham Golf Club.

The Union donated £145,296.37 through fund-raising activities last year, including donations of £35,235.75 to the Winnicott Foundation, £24,204.97 to Islamic Relief, £9297.00 to Tsunami Rehabilitation and £5,192.76 to Children in Need.

Examining the statement of Financial Activities (for the year ending 31 July 2013), ignoring the £359,804 estimated for support costs (which are in fact provided by College for free), over the 2012-13 year the Union made a £171,246 surplus from Social Enterprise Activities (including bars, the Union Shop and hiring out spaces in the Union building).

Overall, the Union seems to be in a healthy financial position, having achieved a surplus of £196,112 over the 2012-13 period.

According to the Union's Balance Sheet on 31 July, the Union owned

Imperial to create new Centres for  
Doctoral Training for postgraduates



Nida Mahmud  
Writer

Over 400 postgraduates will join seven Imperial doctoral training centres in the next five years. The research will be in areas ranging from fluid dynamics to chemical biology.

There will be a total of 70 Centres for Doctoral Training (CDTs) between 24 UK universities. The research will be in areas that are considered important for economic growth, this represents the UK's largest investment in postgraduate training in engineering and the physical sciences. The EPSRC will be providing £350 million to the CDTs, furthermore another £250 million will come from industry partners.

The announcement was made by David Willetts, who is the Minister for Universities and Science, he said: "scientists and engineers are vital to our economy and society. It is their talent and imagination, as well as their knowledge and skills, that inspire innovation and drive growth across a range of sectors, from manufacturing to financial services.

"I am particularly pleased to see strong partnerships between universities, industry and business among the new centres announced today. This type of collaboration is a

key element of our industrial strategy and will continue to keep us at the forefront of the global science race."

The Provost of Imperial, Professor James Stirling commented: "These awards underline Imperial's status as a powerhouse for postgraduate education and research.

"Imperial will use its highest ever number of CDTs to train the next generation of leaders in science and engineering while undertaking research that makes a real, long-lasting contribution. This will strengthen higher education, industry and society alike.

"In recent years, Imperial's CDTs have pioneered a series of innovations in doctoral training, including the development of bespoke professional skills training, public engagement, entrepreneurship and cohort-building. This approach has cultivated the right environment for students to combine world-class training in research with the acquisition of a broad range of work-ready skills. Our new CDTs will enable us to take this successful approach to the next level."

The Chair of the EPSRC, Paul Golby said that: "Centres for Doctoral Training have already proved to be a great success and the model is popular with students, business and industry. These new centres will give the country the highly trained scientists and engineers it needs and they will be equipped with skills to move on in their careers."



IMPERIAL COLLEGE UNION

£190,960 worth of stock (think goods for sale), was owed £50,699 by debtors and had a total of £1,525,434 between funds in the Union bank account and cash held on the premises. While the Union also owed its creditors a total of £514,921 at that point in time, after taking into account the value of the Union's investments (£110,627) and the value of its tangible fixed assets (£5,398,106 – which we assume includes the value of the building containing the Union offices), the Union had (at the time) net current assets worth £6,760,904.

In terms of staff salaries, the Union seems to pay a total of £1,773,812

(including pension and National Insurance contributions), with £1,045,000 going to staff in the Social Enterprise category (including full and part-time staff and students at the Union's bars and shops). According to the report on average 49 permanent staff and 109 student staff were employed over the 2012-13 period. The highest paid employee at the Union is paid between £70-80,000.

Overall, the Union is in a good financial position, having made a strong recovery from the 09-10 period and now has healthy reserves which can be used to improve the student experience at Imperial.

Campus Services:  
Silence Abounds

Do Campus Services truly care  
about their stakeholders?

Joseph Letts  
Editor-in-Chief

One week further into the confusion over cleaning in halls and Campus Services has yet to reply to the questions sent to them by Felix over two weeks ago, begging the question: Does the department feel any obligation to providing its stakeholders with satisfactory information? We now approach the end of the first term of the academic year, and for some students there is still confusion over their cleaning rotas, and some would still like to see some token of apology from the department in regards to the poor communication that has gotten so out of hand.

One major cause for concern is the fact that despite the duration that the changes have been in effect, some students still have no idea about whether they have access to cleaning equipment, and if they do have access, some still may not be aware to find it. Here at Felix we find it upsetting that

many new students will have waited a full four weeks before their rooms have been cleaned, without the option to clean it themselves.

Felix believes that at a minimum the Campus Services department should provide much more information about the feedback process they consulted before making the changes, as well as the decisions and reasoning that led to the final choice.

Hopefully, at the upcoming cleaning services review (that Campus Services promised in their most recent missive) we will see a situation where the people who are affected most by the changes get to have some input into the cleaning solution, whether they would like things to return to the way they are, or whether they have suggestions that would drastically improve both their happiness and wellbeing.

Looking forward to the future, Felix hopes that all College departments will learn from this mistake and will consult or at least inform stakeholders of important changes to the services it provides, rather than just implementing changes, which are announced at a later date.

Felix

Sponsored Editorial

Student Discounts At  
Fresh Hairdressers  
70m from South Kensington tube



Men's cuts £22 (normally £35)  
All over clipper cuts from £10  
Women's cut and rough dry £28  
Women's cut and salon finish  
blow-dry £38 (normally £55)  
Highlights from only £40

Sorry CASH only!

FRESH hairdressers are offering the best haircuts, prices and service in South Kensington.

Please call 0207 823 8968 to book an appointment and ask for a student discount. Please bring your student ID we look forward to seeing you.  
We use the best styling products from Wella, Moroccan Oil, L'Oreal.



Appointments available Tuesday to Saturdays 9.30 to 6.30

We are only 70 metres from South Kensington station at 15a Harrington road, South Kensington, SW7 3ES 0207 823 8968.

Check out our website:  
www.freshhairdressers.co.uk



# FEATURES

Editors: **VACANT**  
felix@imperial.ac.uk



# How to analyse aid: using statistical analysis to improve effectiveness

**Rory Fenton**  
AfroDev President

There is probably no other question in economics that evokes such strong emotions and creates such a clear divide between left and right. To the left, the world's poor are caught in a poverty trap; without the minimum resources to help them help themselves, they will never break out of this cycle. Aid, then, is clearly needed as a big push to kick things off. To the right, aid encourages dependency, distorts markets and props up nasty regimes – keeping the poor in their place. There is no sign of either side winning this battle. But subjecting individual aid projects to robust statistical analysis through randomised controlled trials (RCTs), modelled on medical trials, could provide a way out of the ideological mire.

So what is aid? Aid can come in many forms – such as military aid to help a country fight terrorists, or budgetary aid sent with no strings attached to bolster a government's finances, or the cancelling of historic debts. Here we focus on a more altruistic form of aid – that sent to help the world's poorest with little expectation of benefit to the donor, for example direct financing of mosquito nets or primary schools.

The moral cause for wishing to alleviate world poverty is a clear one. That one billion people live on this planet on less than a dollar a day while so many of us live in luxury is surely a moral outrage. The philosopher Peter Singer has compared such inaction to standing by a lake as a child drowns. Surely, he reasons, no person would give a second's thought to diving in? Practically speaking, of course, giving aid is complex and costly yet the principle, he argues, is the same.

This metaphor succinctly encapsulates the argument for aid – that only immediate, decisive and potentially painful action, essentially diving in, can help the poor. The clear implication of Singer's reasoning is that the solution is to get actively involved – but what if modern aid offers our metaphorical child little more than a faulty life ring? Or worse, what if aid actually helps to drag her down? This is the real question in the aid debate. This goes beyond rock concerts and emotive advertisements; is the obvious solution the right one?

## Diving In

Many would say yes. These aren't solely rock stars and actors –

distinguished professors of economics such as Columbia's Jeffery Sachs see aid as an essential way of unlocking the economic potential of the poor. In his book *The End of Poverty*, Sachs points to farming as an example of this – if farmers are donated fertiliser, they can massively increase their harvest, which in turn gives them money to be able to buy their own fertiliser next year, thus creating a virtuous cycle. For Sachs, the farmers are caught in a poverty trap (unable to buy the fertiliser they need to progress) and without an aid-based kick-start (free fertiliser) they will never escape from poverty. Sachs sees this poverty trap model applying to many other areas of development – sick, poor people cannot afford medicine, but whilst they are ill they are unable to work, meaning that they get even poorer. But aid also has a larger role to play. It can help small, cash strapped democracies stay on their feet and provide for their people's basic needs. It can also kick-start basic infrastructure such as roads and schools.

Sufficiently compelled by this call to action, I headed off with some other Imperial College students last year to witness just this type of aid – designed to kick-start economic progress – in rural Kenya. Herdsmen, caught by a severe drought, were encouraged to take up fishing. A British charity subsidised nets and boats for the fledgling fishermen, with the idea that the subsidies could be gradually reduced as the economy took off. Each boat would take ten fishermen and each fisherman supported around ten dependents, meaning 100 people were helped by just one boat. It seemed to be the perfect project.

## Unforeseen Consequences

There are, however, powerful arguments against this kind of help. On a nationwide scale, the large and sudden influx of foreign money makes the local currency rise in value, suffocating exports. This was best documented in Holland when the manufacturing sector contracted, following the discovery of natural gas in 1959, earning the phenomenon the name Dutch disease. Furthermore, money given to poor country governments needn't necessarily end up going to infrastructure or healthcare. According to Paul Collier of Oxford University, 40% of African military spending is funded by aid, unbeknownst to the donors. It is certainly no secret that the poorest countries often have the nastiest regimes.

Aid can also undermine democracy, making poor countries accountable



FEED MY STARVING CHILDREN

to donors, not to their citizens. The old American maxim of 'no taxation without representation' too often works in reverse – no representation without taxation. When poor countries rely on foreign funds and not taxes from local people and businesses, the need to be accountable to citizens is reduced and corruption and inefficiencies can more easily set in. Somaliland provides an excellent counter-example – not recognised as a country by the international community, it cannot receive aid and in fact has seen significant improvements in accountability and reduced corruption as citizens demand more for their taxes. And lastly, we cannot forget the ethical implications of aid recipients relying on public services provided by politicians in wealthy countries for whom they cannot vote.

## The Truth Lies in the Data

Where does this leave the Kenyan fishermen? They lack a mature manufacturing sector so that shouldn't be an issue. But how could the other factors affect them? It is here that we get to one of the biggest problems with aid – the lack of good data on its effectiveness. In truth neither the left nor right perspectives can offer a good evaluation of such a program without first gathering data. This was exactly what we did in Kenya.

Through interviewing 200 of the fishermen, we were able to gain a clearer picture of how the subsidies were impacting the local economy. The results were surprising; the perfect picture offered by aid evangelists was found to be murky at best. Investment in boats turned out to be not only a surprisingly ineffective way of catching fish – as opposed to just tying nets to rocks and leaving them – but

was also heavily biased in favour of the relatively rich fishermen who could afford to pay the unsubsidised half of the price. However, we also found that investment in nets, especially targeted at the poorest, was a very cost effective way of helping out, with nets paying for themselves after two months. This was not only interesting, it was also very useful. The data enabled the charity to refocus its efforts, saving valuable donations and improving the quality of life for the fishermen.

Our research is part of a bigger shift in the aid debate – its scientific revolution. In seeking out quality data, we were able to get to the heart of the issue. The apex of this is the use of randomised controlled trials (RCTs), in the style of medical trials, on aid projects. The idea is simple. Half of a population is given a form of aid (nets, extra teachers etc.) while the other isn't. Those who do and don't receive the aid are chosen at random and in such a way that they cannot affect each other so that the impact of the aid can be clearly demonstrated. Essentially like any lab experiment. The idea is simple and common sense to any science student but it is having a significant impact on a hitherto opaque world.

The world before evidence-based medicine is hard to imagine – quack doctors of varying credibility combined folklore and pseudoscience to propose cures for just about any illness. Today, trials form the basis of medicine. Think of the 1991 discovery that folic acid reduces incidence of spina bifida, as a result of which 10% of the world's flour is now fortified with the acid and thousands of such birth defects have been prevented. This same process is gradually taking place in aid. RCTs in Uganda have found that providing food in schools won't increase enrolment, but it does boost

attendance. RCTs across Africa have found that charging even a nominal fee for a malaria bed greatly reduces their use, contrary to the intuitive view that people only value what they pay for. Aid is experiencing its own scientific revolution.

The pioneers of this field are undoubtedly Professors Abhijit Banerjee and Esther Duflo of MIT's Poverty Action Lab, who have been working in this area since the Lab's founding in 2003. In their 2011 book *Poor Economics*, they outline the results of their RCT work. Their findings agree with neither left nor right, they simply find out what works. A new student union project at Imperial College called The African Development Project is dedicated to doing just this; involving science and engineering students in the evaluation of aid projects.

The potential of RCTs is very exciting indeed. They can provide no magic bullet – far too many such cures have been proposed in the past – but they do provide a way to go beyond the ideological warfare and change the aid debate for the better. Beyond simple moralising and abstract philosophising, scientific trials offer perhaps the most effective approach yet to understanding and tackling poverty. Its message is simple: find out what works, and then fund what works.

*Imperial students interested in learning more about what makes an effective charity might want to attend "How To Run The Most Effective Charity In The World" on Thursday 5th December, 6pm Huxely 145, a panel discussion with the directors of two of GiveWell's 3 "most effective charities in the world 2013" and the director of a charity consultancy. Email afrodev@ic.ac.uk for info.*



 @feliximperial

 FelixImperial

# FEATURES



## Hear Hidden Voices of Africa at ICBS

**Cheong Yi Heng**  
TEKUA Director, Enactus

**H**ope comes before sunrise, a dream in hand and the promise of a better future. For the children of Tanzania, this is not always true. Less than 20% of Tanzanian children have access to secondary school education. This is due to the lack of funds and secondary schools that do not work closely together. However, a glimmer of hope comes in the form of TEKUA. As an education centre that provides free education for the neediest students, TEKUA aims to empower its students with knowledge, giving them a means to make a living. TEKUA gives them hope, and our dream of a better future.

Two local men, Chris and Ally, saw the plight of teenagers and decided to set up a centre where young people can learn basic skills. Together, through much personal sacrifice, they purchased a building in Usa River, about twelve miles outside Arusha.

There are about 120 students in TEKUA. All students (ages 13-25) come from impoverished backgrounds who cannot afford regular secondary

school education. The students of TEKUA study English, Art and basic IT skills. Learning English allows them to gain employment as safari guides and the other subjects equip them with the skills necessary to set up their own businesses and sell what they have created. This allows them to make a living to support themselves and their families as well as to be able to join the workforce.

TEKUA relies heavily on donations from charitable organisations such as Helping Africa 100 to fund the education centre and its activities. However, 10% of their expenditure comes from self-sustaining ventures such as the selling of artwork and souvenirs made by their students. This reliance on donations is worrying; when financial difficulties arise, very often the grants dry up. This happened in 2008, when the financial crisis caused TEKUA to nearly shut down due to a lack of funds.

Enactus Imperial began its involvement with TEKUA in 2007, when project founder Kushboo Lalwani visited Tanzania and discovered it. She saw firsthand what she had always seen in the media – the deprived conditions under which the locals were living. She saw how the absence of the most basic ideas and

objects were hindering the growth of a Tanzanian child in every dimension imaginable. She came back to Imperial and decided to import the artwork that she had seen in Arusha. She, with the help of other students, went on to display it in a very successful exhibition. The capital raised was used in relocating the TEKUA to a better location, positioning it within the reach of the larger region.

In recent years, the economic situation in Tanzania has been improving. More tourists than ever are visiting the safaris, making the Arusha region a staple location on the savvy traveler's list. However, the safari industry is becoming increasingly saturated, prompting TEKUA to begin teaching new courses in carpentry and furniture making. Vocational skills such as these are in demand in rural areas, where a trip to the furniture store in the commercial centre of Arusha is a luxury few can afford. However, many students graduating from their course at TEKUA find themselves with the skills, but without the tools to make a living. One of the causes that money from the exhibition will go to is the funding of carpentry kits for the brightest students, allowing them to sustain themselves once they graduate. In this way, by

supporting themselves and not being reliant on charitable donations, the sustainable source of income will see them through longer than a simple grant can.

Enactus Imperial this year also hopes to engage both students and teachers of TEKUA from the UK through the internet. Generous donations of computers and hardware equipment from businesses have allowed TEKUA to set up its own little cyber café, the profits of which go to sustaining the education centre. The team aims to develop a package of teaching materials, geared both at teachers and students of Tekua, to empower them with soft skills such as basic management and fundamental finance. Doing this would benefit not only the teachers in their job of running the centre; the students would also have a chance to be taught skills and concepts they would otherwise not have access to. With students going from primary school to TEKUA, and then directly into jobs that force them to balance their expenses from day one, failure to empower is not an option.

The situation in TEKUA has improved much in the past decade, and the centre has grown to be able to accommodate more students, lifting

them out of backbreaking poverty. Enactus Imperial has worked with the centre since 2007 and seen it go from strength to strength. Much still needs to be done, however, and for all the students that pass through its classrooms, it's a drop in the bucket compared to the overwhelming need for education in the country. Faced with such statistics, it's easy to lose hope. TEKUA refuses. Its drive to give underprivileged Tanzanians a better shot at life, its willingness to be the boy that throws just one more starfish into the ocean, has brought it this far. Whenever help is needed, wherever we can provide it, Team TEKUA and Enactus Imperial will be there.

But, will you?

*Enactus Imperial hereby invites you, the reader to the ART EXHIBITION: TEKUA – the Hidden Voices of Africa showcasing an intriguing blend of styles and unique mediums - highlighting the versatility of minds and talent of the students.*

*WE see past, present and future in different aspects through expression and realism of their artwork. It will be on the 4th December at the Imperial Business School Entrance. Come and be amazed! We will also be selling doughnuts to raise money, so grab one while stocks last!*

## Social Innovation: Saving the World

**Chen Yann Qi**  
SIB Organising Team

**B**et you didn't know your one idea can save the world! You will be surprised to find that in a typical week, the average UK household is throwing away what would have been six complete meals. Not shocking enough? Well, how about picturing five Wembley Stadiums full of food waste? That is the amount of food waste we generate every year – all these could have been good, consumable food that would have fed the stomachs of the millions who are badly in need of it. And if food wasn't so much of a concern to you, how about heat and fuel, since the supposed worst winter in 50 years is hitting us right now? Canary Wharf, tall skyscrapers, the London Stock Exchange – all the posh and modern

images of London would have never hinted to you that UK is ranked the 2nd-highest in Europe for the number of people struggling to pay their energy bills. Households are being trapped in fuel poverty, a trend that has increasingly blighted the lives of millions of households. And of course, there are so many other issues like environmental damage, child poverty, ageing population and healthcare. You might have heard of all these before, but have you ever stopped and pondered seriously the extent of all these social problems affecting the UK?

You might ask – how does one individual solve all these and more? It might sound really tough, but rest assured that it is not totally impossible. In fact, what you really need is an idea. A good idea that may be simple, easy, yet effective and gives a great impact when implemented on a large scale. As amazing as it might

sound, a single good idea indeed has the ability to make a large difference, thanks to a new business model called social enterprise.

Social enterprise is, in the simplest terms, a business with a heart. Fundamentally, it is still a business,



therefore making money and generating profits are still essential. It is, however, unlike a charity where it gets its income from donations either by the government or the

public. A social enterprise makes its own money through provision of goods or services. But what makes a social enterprise really different from typical businesses is how the goods and services provided help address a particular social problem, and how most of the profit earned through the business is reinvested to grow the business further.

Therefore, essentially, a single idea that helps address a major social problem may be developed as a business and be transformed into a world-changing phenomenon. Take for example The Big Issue, a business set up to give homeless people a chance to earn income. The Big Issue is a news & current affairs magazine that is sold to homeless people for 75p. It is later resold at £1.50. Driven by the social meaning behind this, it became so popular that weekly circulation figures topped 135,000 in the UK.

*With the mechanism of a social*

*enterprise, we at Imperial Hub believe that every student in Imperial has the potential to change the world, as long as you have an idea for how to do so. Hence, we are organising for the first time a Social Innovation Bootcamp from 7-8 Dec 2013. Join us to build your own social enterprise within 48 hours to solve some of the UK's most pressing social issues. There will be a series of workshops where you learn from our industry experts and hands-on sessions to really get your hands dirty. At the end, there will be an opportunity for you to pitch to a panel of judges. The top team will eventually be shortlisted for mentoring schemes and fast-tracked to Imperial Create Lab's Venture Catalyst Challenge 2014!*

*Early bird tickets are available until Saturday this week! Secure your spot today at*

[imperialhub.wix.com/sib2013](http://imperialhub.wix.com/sib2013)





# Become a property owner in London

## Are you thinking of buying property in South Kensington?

**James Tsim**  
Business Editor

Imperial houses some of the wealthiest students in the UK. At Imperial, students are only able to live in college provided student accommodation for their first year, before moving out with friends or becoming a hall senior. As SW7 is the most expensive postcode in the UK, rent in the neighbourhood can be extremely expensive. One way some parents get around this problem is through investing in property in London. Trends are good at the moment in London, with the London Property Watch measuring 14.2% growth in house prices for a one bedroom property in London between October 2012 and October 2013.

Most universities can accommodate first years in halls of residence, but around 70% of all students in most university towns will be looking to the private sector for accommodation (Telegraph, August). According to HESA (the Higher Education Statistics Agency), in the 2011/12 academic year, there were around 2.5m students in Britain, so this would amount to 1.75m students looking for accommodation.

In the past 18-24 months, there has been a 20-30% uplift in parents specifically purchasing properties for their children to live in during study. These customers are generally dissatisfied with the return on their other investments such as pensions, ISAs etc, and want something that will offer a decent return whilst

simultaneously helping their son or daughter through study. Once their child's period of study has passed, they will either sell the house or continue to rent it out for a steady income booster. These customers may already have a buy-to-let property, however will not be experienced in property investment. Key factors which they must take into account when choosing a property is the area, property type, how to finance it, how to manage it, etc. These factors coupled with the probability that the parents will be buying at a distance means that a good letting agent is recommended.

Usually a student plus around 3-5 others will live in the property, but rent will only be charged to the housemates. This is important, as there are regulatory implications for mortgages on properties that you will let to family members – by only charging rent to the housemates, the parents avoid this.

A few pointers to parents investing in university digs for their son or daughter:

- Most BTL mortgage lenders require the rental income to cover the mortgage interest by about 120–130%. In order to achieve a good yield, many BTL investors opt for an interest-only rather than a repayment mortgage – however, this means that the capital part of the loan needs to be repaid, either by the sale of the property or a separate 'investment vehicle'.

- Your letting agent should be accredited by ARLA (the Association of Residential Letting Agents), NAEA (the National Association of Estate Agents) or RICS (the Royal Institute of



Chartered Surveyors). This means that they will have minimum professional standards and there will be a route for redress in the case of misconduct.

- The running costs of a rental property include a list of things such as: BTL mortgage repayments, tax on rental income, repairs and refurbishments (allow for around 10% of annual rent), agency fees (varies, usually around 12% of annual rent) and Voids (periods where the property is empty – most landlords again allow for around 10% of rent, but as this is a student property there is a chance that it could be empty for as much as a quarter of the year).

Finally if you are planning on investing in South Kensington, according to the London property watch, the average cost for a 1 bedroom property in South Kensington currently is £912,000; 2 bedroom is £1.568 million; 3 bedroom is £2.256 million. Back in early 2006, house prices in South Kensington for a 1 bedroom property was just below £500,000. This can be compared with figures to properties in Hammersmith,

where the average 1 room property is just less than £400,000. On top of that, as an investor, you will be coming under increasing competition from universities and colleges which are buying and building brand new student accommodation as well as snapping up the good properties intending to offer the wealthiest students luxury and glamorous accommodation.

Thank you to turnkeylandlords.co.uk for providing a portion of this information. *TurnKey Landlords is a specialist buy to let mortgage website set up by TurnKey Mortgages and run by landlords. We can therefore offer you expert advice based on our wealth of knowledge and experience in the buy to let market. As a whole of market mortgage broker TurnKey Mortgages offers the complete range of mortgage products and is directly authorised by the FCA to provide you with the right advice. Most BTL mortgages are not regulated by the FCA however, they follow their principles and guidelines for all its customers.*

## Summer Finance Internship

Quadrature Capital LLP is a technology company applying rigorous statistical and mathematical methods to investment management. Founded in 2010 by two Ex-D.E.Shaw Portfolio Managers, we aim to combine great people and technology in a friendly, energetic and creative environment.

This summer we have openings for four quantitative trading research analysts. Areas include time series analysis, machine learning, optimisation, risk, slippage.

Candidates must be highly numerate and able to program, but no financial experience is required. An ability to be practical rather than theoretical will be helpful. Competitive rates. City based.

Application is by CV and covering letter.

Email: [recruitment@quadraturecapital.com](mailto:recruitment@quadraturecapital.com)  
Deadline for applications January 31st 2014



Company Number OC356491

Regulated by the FCA FRN 560678

**FREE  
INSIGHT  
DAY WITH  
FELIX  
BUSINESS**

**Send an email  
to:  
[felix.business@imperial.ac.uk](mailto:felix.business@imperial.ac.uk)**



Deutsche Bank  
[db.com/careers](http://db.com/careers)

# Some banks call technology the **back room**

---

Agile minds call it the **engine room**

---

## Group Technology & Operations (GTO) Graduate Program

Technology drives everything we do. It allows us to execute trades across multiple time zones. It informs our investment decisions. It shapes the way we transact with our clients. Without it, our business simply wouldn't function. And that's why GTO graduates have such a vital part to play in Deutsche Bank. You'll work at the very heart of our business — delivering solutions that have a real impact on our future.

Applications are reviewed on a rolling basis and deadlines are as follows:

Analyst Training Program

(London & Birmingham) - **Sunday, 8th December 2013**

Analyst Internship Program - **Sunday, 30th December 2013**

Spring into Banking Program - **Sunday, 5th January 2014**

To find out more and apply, please visit [bit.ly/1ff7Ajq](http://bit.ly/1ff7Ajq)

Discover something different at [db.com/careers](http://db.com/careers)

*Passion to Perform*







# The magic of metamaterials

**Keir Little** talks about Harry Potter, US Defense research and the creation of a new frontier of science with Professor Sir John Pendry

**F**unction through structure" is something of a mantra for researchers of metamaterials, a truly twenty-first century field which aims to create materials with bizarre and fascinating optical and magnetic properties, invented here at Imperial by Professor Sir John Pendry.

"It was serendipity, really," he told me. His office is warm and inviting, a far cry from the laser and steel-filled lab one might expect of the inventor of the invisibility cloak. "I was doing consultancy work with the Marconi Company in the 90s. They were interested in producing stealth cladding for warships which consisted of carbon fibres. These worked very well, but they didn't know why."

"The carbon fibres strongly absorbed in the middle of the typical radar frequency band, but in a very narrow range; however, they found that if they spread them very thinly on paper, it becomes a broad band absorber over nearly the entire radar frequency range, but why?"

"Obviously, they were interacting with each other. My first impression was that they were touching, but my second take was that if you have a wire, there's a magnetic field associated with it that's inversely proportional to the radius. If the wires are very thin, you have a very powerful magnetic field. There's a magnetic loop connecting the wires, so it's magnetic induction. You wouldn't think that, would you, just from putting a conductor down? That gave me the idea of function through structure."

Marconi had unwittingly invented the first metamaterial. "They were so

pleased with that result that they said, 'go away and do something interesting that you like!' So I went away, and what I did involved a series of structures whose properties were dependent on the structure rather than what they were made of."

John Pendry's publication of his theory in 1999 gave rise to the new topic of metamaterials, in which the elements or molecules that make up the material are secondary to the arrangement of its larger parts: while some metamaterials are discernible only on the nanoscale, some have structures that are easily visible, like magnetic split-rings.

"The next thing was to see if we could get some unusual magnetic properties, so we devised these little so-called split rings. They're about 5mm across. If you put a magnetic field along here, the current tries to go round the loop but can't because we've deliberately cut it, but there is some capacitance between the two loops, so the current can flow through that. What you've got with loops with an inductance and a gap with capacitance; it's a little resonant circuit. This material has a very peculiar property: it behaves like an ordinary magnetic material below the resonant frequency, but if you tune the frequency above that, the response flips, so the applied magnetic field is trying to push one way, and the response is in the opposite direction!"

This was the first step towards one of the greatest early breakthroughs in the field: materials with a negative refractive index, where light bends the opposite way to normal materials. In 1967, Russian physicist Victor Veselago theorised that a substance

with both a negative permittivity and permeability – the properties which define its response to electric and magnetic fields – would also have a negative refractive index.

"You never find this in nature." Professor Pendry continues, "it was the realisation by my friend and collaborator David Smith in San Diego that with this new metamaterial which I announced in 1999, they could make in the laboratory a negative refractive material. His group made the first; that set off a lot of interest and a lot of controversy. It also stimulated me to think of what else you could do with negative refraction: if you build a lens out of this negative refractory material and you do it right – you have to do it exactly right – then that would break the so-called diffraction limit."

"It's hard to explain how controversial these ideas were at the time, people got really upset and I really had to handle some very violent criticism. I think those people would have to agree with me now that negative refraction, sub-wavelength resolution is a valid concept."

From this theory came the perfect lens, in which light can be focussed down to points far smaller than its wavelength, at the nanometre scale. This could lead to microscopes able to directly see large molecules, such as DNA. At such scales, the usual laws used to describe light rays break down: 'transformation optics' is the name given to manipulating light waves at this level.

"Have you heard of DARPA?" The USA's Defense Advanced Research Projects Agency is most famous for inventing what would later become the Internet. "They had some funding problem, and invited me to a meeting. I wanted to show off this transformation optics, so I had to think of something that would surprise



them – that's how the invisibility cloak came into being. I realised I could use this transformation technique to hide an object, and oh boy, did they go wild on this! I didn't expect them to take it quite as seriously as they did."

The invisibility cloak is what Professor Pendry is most famous for in the public eye. "That led to, largely due to JK Rowling, a huge amount of popular interest. I think it was a great opportunity to sell science to people: everybody knows what light is; thanks to Harry Potter, everyone knows what a cloak is and that it's something magical. If you say you can make one the public are immediately interested

and say, 'it's magic! How can that be?!' But you explain to them that it isn't magic, it's really just hard science."

Small-scale, single-wavelength invisibility cloaks have been made, but we're still very far away from creating one of the Deathly Hallows. More modest metamaterial products, however, are already being manufactured. "It's a typical trajectory in engineering when you have a very new idea: the engineers want to do what they're doing already, but just a little bit better, so they're making lenses which are lighter and focus a bit better."

Toyota are funding the development

## The invisibility cloak

**Amrita Ghosh & Arya Mehta**  
Science Writers

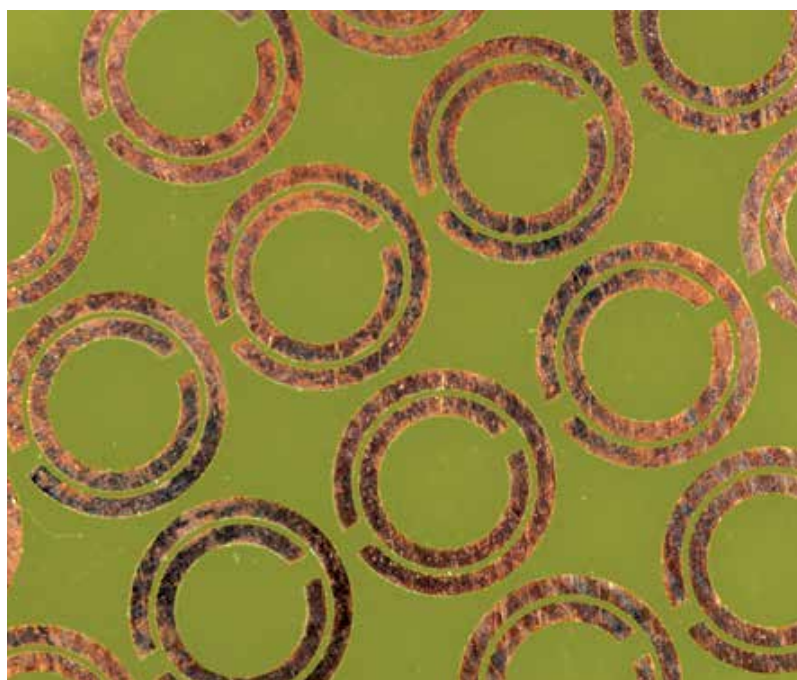
So far, the most popular application of metamaterials being worked on is the 'invisibility cloak'. This idea was first proposed by Professor Sir John Pendry. His team received a grant of £4.9 million to develop metamaterials for 'invisibility cloaks' in 2009.

The aim of this cloak is to use metamaterials to grab light and conceal it, therefore making it invisible to the human eye. This idea is based on the same principle as how water in a river flows around a stick – in this case

the invisibility cloak is the stick preventing reflection of the object hidden (e.g. water), making it undetectable to the eye.

This research does not mean that Harry Potter fans can have a new addition to their 'wizard collection' for Christmas, but instead it may hold great promises for biomedical and military applications. This design could protect areas against radiotherapy for instance, or it could be used as a new strategy for camouflage.

The potential of the 'invisibility cloak' is unimaginable, and it only emphasises the creative uses of metamaterials. Progression in this field could generate a new era of technology and gadgets!







of metamaterial lenses to focus terahertz rays, which are found in the radars of cars with active cruise control systems, and in projects to make self-driving cars. Similar lenses can be used to track the motion of satellites without costly mechanically-moving dishes – essential for telecommunications in remote areas.

In Imperial's Department of Electrical and Electronic engineering, Professor Richard Syms is developing metamaterial-based detectors for MRI machines, which allow safe and detailed imaging of the heart and brain.

Professor Pendry is keen to point out these beneficial areas of research: "people say it's all about radar and stealth, killing people and so on, but it's not: it's about safety in cars, and health. In any place where you can use electromagnetism, you can probably find an application for metamaterials."

## Metamaterial-enhanced solar cells

Emma Wills  
Science Writer

A newly developed layer of tiny Aluminium studs has been found to enhance the efficiency of solar cells by up to 22%.

The coating, made up of cylinders just a hundred nanometres across, was investigated by scientists at Imperial College as part of an international collaboration.

They looked at similar structures in gold, silver and aluminium, to see which could scatter the incident light at a high enough angle without absorbing too much itself.

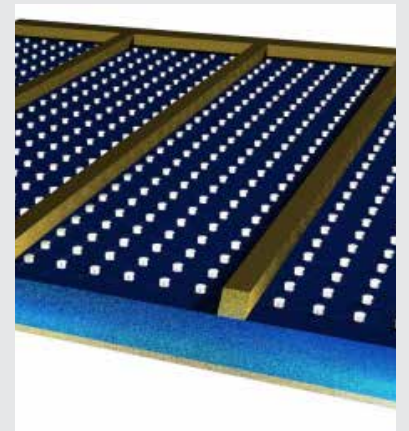
The scattered light takes a longer path through the solar cell, which can then extract more of its energy.

This increase in efficiency looks to make the price of solar cells more competitive with fossil fuels in the future.

"As the absorbing material alone can make up half the cost of a solar panel our aim has been to reduce to a minimum the amount that is needed," lead author of the research Dr. Nicholas Hylton said.

For thinner solar cells in particular this is good news as they are already cheaper than traditional, thicker solar cells, but the thinness of their light-absorbing material means that they are too inefficient to be widely used.

This new coating could mean lightweight, flexible solar cells that could power laptops and other everyday devices.



IMPERIAL COLLEGE

## Frozen rainbows and corkscrew lasers

Professor Ortwin Hess speaks to **Keir Little** about his research

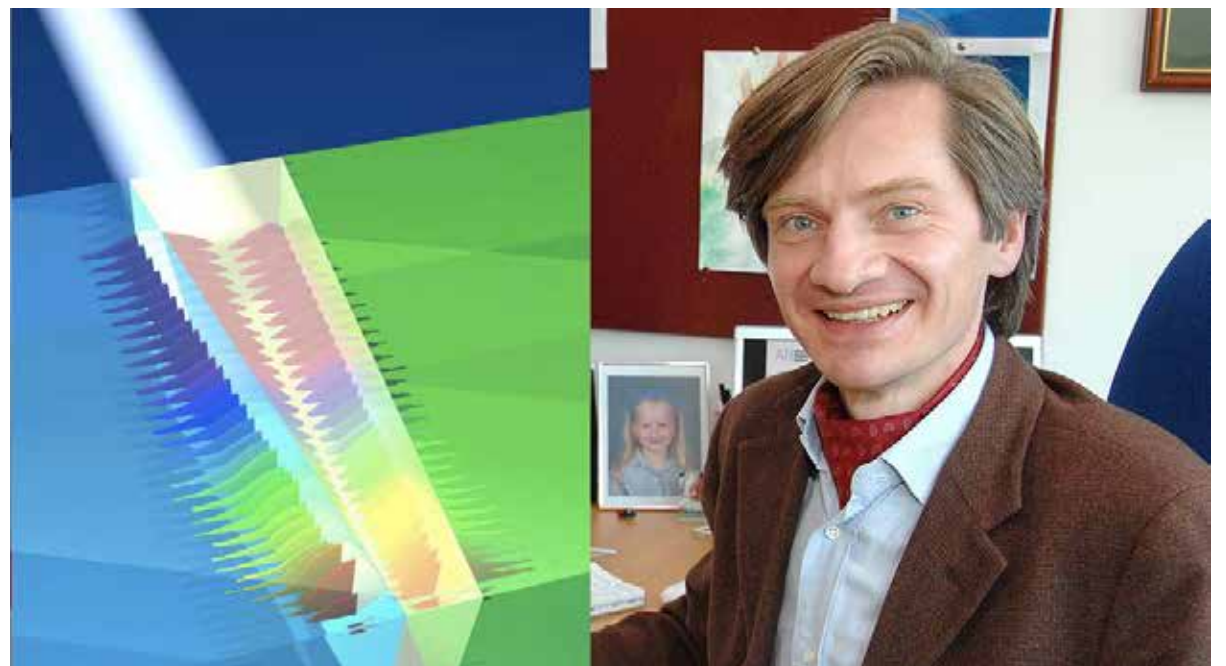
Ortwin Hess is known for the 'trapped rainbow' principle, but this is just one step towards his exciting vision for metamaterials. "It stops light," he says about it, "so the only thing it can do is 'lase' energy off its surface. Why is this different to a good old normal laser? It doesn't have a cavity and is about a factor of ten thinner. You could include this in integrated circuits."

Successful pairing of photonics and electronics would have wide applications, including a practical way of realising quantum computing. "I think the way how one, as a condensed matter physicist, approaches these problems is really quite unique as we know we can do something special with optics because we have

an understanding of how to arrange and change matter. The task is to get photonics down to where electronics is, as the wavelength of photons is around a factor of a thousand bigger than that of electrons. Photons are very good for communication over fibres, but very bad for integration into circuits. We're aiming to change that.

"Two things that go throughout all that I've looked at in my academic career are materials and light. I was first drawn to spatial-temporal effects in very small lasers and semiconductors: this was before metamaterials were invented."

The theorisation by John Pendry of materials with a negative refractive index was the next step in Professor Hess's research. "My way of thinking about these metamaterials was about



## What is plasmonics?

Plasmonics is the study of free metal electrons which trap light at the interface of a metal and another substance, creating 'surface plasmons'. This confines light to an electronic scale, and is the basis on which metamaterials science is built.

Imperial's Professor Stefan Maier is a researcher in plasmonics and nanophotonics, who was pivotal in developing the field as a modern science. "The topic is a little older than metamaterials," he says, "by about one hundred years or so! But it was really revolutionised by the development of nanofabrication, so new research in plasmonics began at the end of the 90s and the turn of the century."

"I did my PhD at CalTech at that time, which showed that you can make tiny waveguides far below the diffraction limit based on surface plasmons." This discovery was key to enabling the research of many other plasmonics and metamaterials scientists.

"I think the most exciting applications are nanoscale biosensors and highly efficient light sources. If you focus light down to the nanometre scale, you can interface it with molecules."

what they can do to the speed of light. We looked into controlling the speed of light and saw that under certain conditions, through the clever arrangement of the width of waveguides, one can approach states where the light would need to stop. That realisation led to the trapped rainbow principle."

In collaboration with Ullrich Steiner's group at the University of Cambridge, Professor Hess considered a 'bottom-up' approach to making metamaterials. By depositing gold on a framework of co-polymers, then selectively etching and removing the polymers, a 3D 'gyroid' structure was made which has chirality: it can come in 'left-handed' and 'right-handed' forms.

"You have this three-dimensional structure with a chiral property,

which gives us an avenue to generate metamaterials with optical activity, which means they interact with polarised light, something that normal materials struggle with.

"Having manufactured them, the experimentalists investigated them and found the very disappointing result that although these have a highly chiral structure, they don't have much optical activity.

"This is where we theoreticians came on board and were asked to develop some models. We realised that when wires are helical they have different properties than from when they're straight. This is one of our major research thrusts at the moment. The aim is to build something that doesn't exist yet: a laser that emits circularly-polarised light. Can you imagine that?"

Light can be plane polarised, causing all the waves to lie flat in the same direction, or it can be circularly polarised, in which the light corkscrews in a left- or right-handed direction. Circular polarisation is used to create the 3D effect at cinemas, but on the nanoscale could be used to probe the structures of molecules and materials.

"At Imperial we have something that is probably unique worldwide: we can bring together knowledge on metamaterials and knowledge on lasers. Normally, the researcher communities don't talk or work together. We're now combining the two using gain and active materials. This has huge implications: it opens up a whole realm of research. There's no way of controlling light so strongly as with a metamaterial."





# Geneva 2- Peace Talks for the Syrian Crisis

## President Assad's adversaries meet in the wake of ending the Syrian Crisis

Jash Rughani  
Politics Editor

**A**fter a political turmoil that took a toll on the lives of thousands of hapless innocent Syrians, peace talks between opposing factions has emerged as the only recourse for the multitude. The situation on ground has deteriorated beyond recognition- derelict streets, blast ravaged homes, unemployed youth, crying orphans and polio-infested children abound the Syrian land.

The leaders of the Syrian National Coalition, President Assad's adversaries are meeting to agree its stance on the so-called "Geneva 2" talks, which aim to end Syria's two-and-a-half year civil war by creating a transitional governing body. They strongly demand that the President's reign be called off and that President Assad relinquish his office as the head of the state.

A few other factors bolster Assad's claim to hold onto the top



OXFAM AUSTRALIA

position. Ever more Syrians reject the opposition coalition's authority, seeing it as an ineffective group exiles that have failed to supply arms or aid to fighters on the ground. On November 4th one of the most senior pro-Western rebel commanders in northern Syria resigned in frustration, citing divisions among fighting factions and the fecklessness of the national coalition as reasons. On October 15th 50 groups, most of them Islamist-leaning, announced that they no longer recognized its authority. Syria also claims to have destroyed all of its chemical arms by now.

Damascus has decisively said Assad will stay in his post at least until his

terms ends in 2014 and that he may run for re-election.

These demands are being asserted by the National Coalition, which claims to be the only representative of the Syrian people, but which doesn't represent even a majority of the opposition groups.

Also, the coalition members demand a certain fulfillment of promises made by intervening nations- the promise to ensure that humanitarian corridors were opened so that aid could reach rebel-held areas currently blockaded by the regime, the promise to release opposition detainees and the promise to bring an end to air raids. In an interview with The Sunday Telegraph, his first with a Western newspaper, Ahmed Jarba said he was willing to take part in the long-awaited talks. "Yes, but do you think we can sit with the regime whilst there are people in Syria who can't even drink water? We have been promised by the West that these humanitarian issues will be solved before the conference."

America who supports the ousting of President Assad and Russia, the regime's staunch supporters have

jointly agreed on the need to end the war and reach a peaceful agreement. However, Saudi Arabia, which has aligned itself with American forces in Syria, has a differing call. The Saudis see an axis of Shia mischief, stretching from Tehran through Baghdad and Damascus to Hizbullah in Lebanon, as their biggest threat, and Syria as its linchpin. On the other hand, Iran has invested billions to prop up Mr Assad's regime and to retain a vital link to Hizbullah.

Mr Assad has felt stronger since America failed to carry out a threat to punish the regime with missiles for its mass-murderous sarin-gas attack on August 21st. Saudi Arabia, infuriated by America's loss of nerve over punishing the Syrian regime with missile strikes after its sarin attack, has embarked on a project to create a new national army in the south of Syria rather than working through the Supreme Military Command, the coalition's armed wing based in Turkey. For months it has reportedly been training 5,000 rebels in Jordan, with help from French and more recently Pakistani forces.

Severe malnutrition is reported, especially among children in areas besieged by government forces. The UN says two in five Syrians now need emergency aid. Neighboring countries warn they can no longer cope with the scale of the refugee influx, the most dramatic since the Second World War. Displaced Syrians now make up nearly a quarter of Lebanon's population. To add to the pall of grief, Al Qaeda is waging polio biological warfare in Syria. The Poliovirus is very contagious and thrives in an infected person's throat and intestines. It could be that Al Qaeda is seeking vengeance as America in the past had abused polio vaccination program to find out Osama bin Laden.

The stalemate in Syria needs immediate redressing. The unrest that has gripped the Middle East has Syria as its epicenter. If not addressed, outbreak of epidemics and economic instability might only aggravate the difficulties faced by innocent Syrians. And redressing can only be effectively achieved by show of sympathy and a compromising spirit from both the factions of a warring nation.

# Nuclear agreement signed with Iran

## But will it really manage to make the world a safer place?

Kartikeya Rana  
Politics Editor

**A**fter months of escalating tensions between Iran and the United States, a nuclear deal has finally been signed. After intense negotiations between the P5+1 nations- the Permanent members of the UN Security Council and Germany- and Iran was signed in Geneva. The agreement is one, which manages to ease the pressure on Iran for a six-month interim period. It's perhaps a small step towards improving understanding between western states and a rather unpredictable nation.

Iran tried to hold talks with the US government in 2003 to come up with a nuclear deal. The Bush administration believed, however, that since Iran was weak and battered by sanctions it would not be able to enrich Uranium and therefore decided not to hold any talks. As a result, the number of centrifuges in Iran has gone up from 174 to 19,000. Although there are tough sanctions in place, the cost of enriching nuclear fuel for an oil rich country like Iran is relatively small.

This realization led to the Geneva Convention and the subsequent agreement. As a result of this deal, Iran will not be allowed to enrich uranium above 5% and any further enriched Uranium would have to be oxidized. Furthermore, there will be greater access provided to inspectors in the nuclear sites, which includes daily access to Natanz and Fordo- two of Iran's key nuclear sites. This deal, however, manage to shut any of the fuselages down. If Iran abides by the rules, there will be no new nuclear related sanctions for the next six months. This, however, does not guarantee any new nuclear sanctions after the aforesaid time period. Furthermore, the sanctions on its trade of gold and precious metals, car-making sector and petrochemical exports will be suspended. This deal has culminated in about 7 billion dollars of sanction release, which is a fraction of the sanctions currently in place against the country.

The deal has been met with mixed reactions around the world. Israel's President Benjamin Netanyahu has called the deal 'a historic mistake'. Iran is a country, which has publicly displayed its dislike of Israel, causing it to be seen as a threat by the Israeli government. Last week itself, Iran's



NYPOST

Supreme Leader Ayatollah Khomeini compared Israeli's to 'rabid dogs'. Thus, Israel desires a complete dismantling of Iran's nuclear program but the fact that the Iranian nuclear program has been legitimized for an interim period has caused it a lot of worry.

This deal has also been a source of worry for Saudi Arabia. Israel may be willing to reach a diplomatic solution with Iran but Saudi Arabia sees itself in the middle of an endless proxy war in the region and it wishes that the western powers, united states in particular, be involved in this war. The Saudi rulers see the Middle East through a sectarian lens. Saudi Arabia is a nation of a Sunni majority and it does not wish to see a Shiite majority country gain power. In Iran itself, people see the deal with an air of skepticism but are excited by the prospects of reduced sanctions and better relations with the west.

The next question to ask is- why did US partake in this deal? By going forward with the deal, the US has tried to make a deal with a state, which not only has a very anti-American sentiment but is also a sponsor of terrorism. As a result of this agreement, it has also managed to aggravate its closest ally in the middle east- Israel.

I believe that one reason why the US signed this deal is because it does not want another war in the Middle East. The frequency with which the US has been going to war in the region in the 21st century has had a detrimental effect on its standing at home as well as around the world. As a result, the Obama administration found it particularly hard to garner support domestically for a military intervention in Syria. Thus, gaining support for a full-fledged war with Iran would be particularly hard. However, the immense pressure it put on Iran due to the secret nuclear program made a war with the nation very likely. By signing this interim deal, the US has been able to ease some of the tension and has reduced the probability of a war taking place in the near future. But this does not necessarily mean that the tensions will not rise again in the future.

The deal signed is an interim one and the pressure is reduced only for a period of six months after which, further nuclear sanctions can be put in place. Thus, the idea that this deal is anything 'significant' is a misnomer. The agreement can be simply seen as a source of cautious optimism but not anything else.

The fact that there are some tactical constraints on Iran's nuclear program has of course made the world safer but this is a nation, which has had a long-standing anti-American rhetoric. Around the same time the Geneva talks were held, Ayatollah Khomeini gave a ferociously anti-American speech to Iran's revolutionary guard corps. Thus, it is unlikely that the nuclear aspirations of Iran are going to decrease in the near future even if that is what the US wishes for. Once this agreement is put into practice, it would also be very hard to reinstate the sanctions on a country with such strong nuclear aspirations.

This is only the first stage of a very long and difficult road. The next step for the 'P5+1' nations would be to try and close some of the fuselages. It will be interesting to see how they manage to ease tensions when the six-month interim period comes to an end.



# Union Page

## You choose the pizza, we'll serve it



**We're introducing some new food offers to our bars and we want you to have a say!**

For the last week of term, we'll have a special guest pizza on offer alongside the regulars on our menu. Feast your eyes on the choices below, and then cast your vote online for which pizza you prefer! The poll will close at 23:59 Tuesday 3 December and the winning pizza will be on our menu from Friday 6 December until the end of term.

- ▲ Mushroom, Tomato and Basil - Fresh Mushrooms, Basil and Mozzarella.
- ▲ Deluxe Spicy - Spicy Beef, Peperoni, Mozzarella and Tomato.
- ▲ Napoletana - Ham, Egg, Mozzarella and Tomato.
- ▲ Pizza Union - Spicy Beef, Tomato, Mozzarella and Chips.

**All pizzas will be available in 9" and 12" sizes.**

**[imperialcollegeunion.org/pizza](http://imperialcollegeunion.org/pizza)**

## Read this year's Annual Report



**Every year the Union produces an Annual Report detailing our financial performance for the year as well as our achievements.** The Annual Report of the Trustees and Financial Statements 2012/13 is our first such publication since registering as a charity.

It has been another strong year for the Union with achievements including:

- ▲ An increase in the number of students taking part in our elections.
- ▲ A 6% increase in satisfaction with the Union in the National Student Survey.
- ▲ The publication of Our Plan - our three year strategic plan.
- ▲ The launch of the Student Academic Choice Awards.
- ▲ A continued strong financial performance.

You can download a PDF of the Annual Report 2012/13 at:

**[imperialcollegeunion.org/annual-report201213](http://imperialcollegeunion.org/annual-report201213)**

## Vote for December guest ales

**The cold and dark nights are approaching and there is nothing better than having a sip of one of your favourite ales inside the warmth of the Union.** To get your favourite ale behind the bar all you need to do is take the poll at [imperialcollegeunion.org/realales](http://imperialcollegeunion.org/realales) and the ales with the highest votes win! There is a separate poll for The Union Bar and h-bar.

**The current poll will close at 10:00, Monday 2 December** and the winning ales will be on sale later in the month.

December's guest ale will join out regular ales in the bars - IPA (£2.90 a pint) and Tolly English Ale (or TEA - £2.20 a pint).

**[imperialcollegeunion.org/realales](http://imperialcollegeunion.org/realales)**

## The Sexual Health Clinic is back!

**Imperial College Union will be hosting another free sexual health clinic run by the Terrence Higgins Trust on Thursday 5 December.** It will take place in the Activities Spaces, Union Building, Beit Quad. Services available include rapid HIV testing, Chlamydia testing, Gonorrhoea testing, condoms, lube and advice. The clinic welcomes all students regardless of age, gender, sexual orientation, study type or country of origin.

Appointments can be booked in advance and a walk-in service is also available. To book an appointment or get more information about the clinic, please contact Zoe Richardson, Representation Coordinator, at [z.richardson@imperial.ac.uk](mailto:z.richardson@imperial.ac.uk).

**[imperialcollegeunion.org/sexual-health](http://imperialcollegeunion.org/sexual-health)**



## COMMENT

Editors: Eoghan J. Totten, Tessa Davey  
comment.felix@imperial.ac.uk



# Exhibition Ode: Fenton Reflects

Rory Fenton  
Columnist  
@roryfenton



This being my last of an excessive six years at Imperial, I can't help but wonder, with more than a little panic, just how different life will be outside of the academic bubble. Exactly how I'll gel with a world of 9-5s, responsibility, mortgages and early nights is uncertain. One thing I do know is clear: I'll never again get to live in South Kensington. More precisely, I'll never again get to live beside Exhibition Road. I'll miss it.

Visiting London from Belfast with my family as a child, I would always insist on a visit here. In every way a future Imperial physicist, it was the Science Museum that leapt out for me and would fill up my precious London

hours; a vast warehouse of discovery and invention – with whole rockets and World War II aeroplanes, hands-on exhibits and guided tours. I wanted to work there. I wanted to *live* there, or nearby. I ended up doing both.

Actually working at a museum, now that's a lot of fun. I spent a few months as a volunteer guide in the Science Museum's *1001 Inventions* Gallery (which looked at science during the Islamic Empire), mostly hovering around the display on numbers. Did you know that the numerals we use today were drawn so that the number of acute angles each has corresponds to the number it represents? Think of chubby, rounded zero. Or the number one with its slanted cap. I imagine I bored the hell out of the hundreds of school kids who passed through, but it was an awful lot of fun.

Heading down the road from College, taking care to avoid the ever-earnest Mormon missionaries, gives a drive-by viewing of one of the finest buildings in London, the V&A. But this beauty is a war veteran – take a closer look and you'll see that her

newly restored side has ugly lumps missing, wounds inflicted by German bombers in World War II and left by restorers in memorial. To get to know the museum, the ideal would be to spend whole days walking around, but for the exam-pressed Imperial student

really did get into Oxbridge. Now for my Toilet Tour; go to this library to study instead of Imperial's and take a map. Every time you want a toilet break, chose a different toilet on any floor you like and take your time walking there. I count eight toilets

catching, with the history of the last 1,400 years marked using its growth rings as a timeline. You'll find it in the main entrance hall, a few floors up. Not forgetting the Darwin Centre – apparently if you flash your Imperial card, smile politely and imply you're some kind of expert, they'll let you in to see their giant squid. Now there's a sentence that I never expected to write.

Exhibition Road is now pedestrianised, with the traffic/pedestrian distinction blurred and speed limits kept to 20 mph, much to the annoyance of drivers. Until two years ago, it was just a regular road, with none of those fancy benches and 'Boris Bike' stations. I'm glad for its makeover, because the truth is that it is more than a road.

For such a busy part of Central London it's pretty amazing to have places where you can sit in complete silence. For such an affluent part of the UK, it's nice to have such a variety of people walking around. We lucky devils get to live here, for now. Make the most of it.

“

**I'll never again get to live in South Kensington. More precisely, I'll never again get to live beside Exhibition Road. I'll miss it.**

”

I offer the most convenient way to get to know the museum – my patented Study and Toilet Tour.

It is a little known fact that the V&A contains the National Art Library, a huge collection of mouldy old leather-bound books in plush surroundings with 100 desks for studying, open to all and free of charge, complete with comfy leather chairs, old fashioned desk lamps and a view of the museum's large quadrangle. You can feel like you

in all – it won't be long before you've covered the entire museum, from the incredible collection of statues on the ground floor to the British Galleries on level 4. And lunch in the museum's café is accompanied by a live pianist on Saturdays so you've no reason to leave the place at all, really.

Then we have the Natural History Museum, a temple to Darwinism and the natural world. The millennium old Giant Red Wood segment is worth

# The Orwellian Spanish Security Bill

Christy Kelly  
Writer



I learned this week that the Spanish government have recently been taking lessons from George Orwell. The new *Citizen Security Bill* is a title worthy of the delicious irony heaped upon the various ministries in 1984, while the Spanish government is trying to use it to introduce new laws that brings the Spain of Franco (as described by Orwell) uncomfortably close.

The bill, if it passes in Parliament, legislates for massive fines (up to €600,000) for a plethora of “very serious crimes”, such as illegal protest (including the particularly Latin form of grass-roots protest, the ‘escrache’), or publishing photos and data of policemen online. One might argue that this graces the police with an element of immunity. After all, the public is rather stupid and might misconstrue advanced and modern police techniques for brutality, assault and all too often, murder. Other ‘serious crimes’ (meriting fines of up to €30,000) include insulting policemen and, um, dangerous, criminal activities such as botellones. Or, in English, drinking outside...

The way this new bill aims to

protect the good citizens of Spain is by rendering them destitute if they protest for being, well, destitute. The Spanish have very sensibly given up their financial independence and left the hard work of managing the economy to the Germans (I'm being ironic).

The population doesn't realise what a blessing it is to have the time to enjoy the golden sun, sea and sands

of Andalusia. They don't realise how wonderful it is that over 25% of the population is unemployed. In the words of Morrissey, “I was looking for a job, and then I found a job, and heaven knows I'm miserable now!”

Miserable Morrissey may be but I hope we can agree the Spanish people probably have it worse. There is a sad truth to the mantra “the only thing worse than being exploited by

capitalism is not being exploited by capitalism” and history has shown that top-down administration has proved remarkably ineffective in resolving social and political problems. The lame attempts by Bismarck and Alexander II are cases in point. Even ‘success’ stories such as Park Chung-hee of South Korea demonstrate just how problematic attempts at genuine reform are when ‘permitted’ from

above. The utter rural-urban divide in South Korea was little mentioned during the visit of Park Chung-hee's daughter to Imperial College recently.

Despite everything, significant hope remains for the Spanish people. Spain has a rich and long standing tradition of grass-roots and anarchist protest. Eric Hobsbawm's essay on the ‘Expropriators’ is one of the most touching historical portraits I have read. The 2008 crisis prompted the re-emergence of widespread protests which have engendered this reaction. It indicates, at the very least, that the Spanish government must be feeling the heat. If it is overcome it could lead to genuine political change. So, in a perverse way, is this a positive sign?

It all depends on the results. It is only with hindsight that we can tell whether this will herald a new beginning or simply the beginning of the end. There is, to paraphrase Alain Badiou, no objective determination of an event. What is required is the further radicalisation and organisation of the protest movement. This means less focus on ethics and doing what is necessary and more focus on politics and doing what is right. This is not quite as paradoxical as it sounds: the difference is best exemplified by the opposition of Churchill during WWII and Che Guevara in Batista's Cuba. At the risk of massively reducing the complexity of the situation, what will it be? A new Generalísimo or the Third Republic? I know which side I'm on.



PUBLICINTELLIGENCE.COM



# Sach a Life: So long and farewell

Arjun Jayaswal

Writer

In today's world I would challenge any reader of this newspaper to nominate a sportsperson that they could truly say they have an emotional attachment to. Messi, Ronaldo, Federer, Nadal, Tiger Woods; these names roll off the tongue as behemoths of their respective sports. Hearing these names evokes admiration, loyalty, respect, but never a sense of identification, brotherhood, or, most importantly, a sense that that particular player could ever possibly be bigger than the game itself.

Well, this is precisely where Sachin Ramesh Tendulkar is different; and in a category of his own. For the reasons that I will delve further into below, this man has dominated both the sport as well as the hearts and minds of fans; boys, girls, mothers, fathers, doctors, lawyers, rich, poor, old and young for the best part of a quarter of a century. He has carried the hopes and dreams of a nation that was beginning to find its voice and emerge from insecurity. The rise and rise of Tendulkar coincided with the rise and rise of naya India – and this is probably one of the most important things to consider.

I will try and make the rest of this article as easy as possible to understand for those of you not yet

acquainted with the glorious sport of cricket. Tendulkar's career as an international cricketer began in 1989 as a tender 16 year-old boy facing some of the most fearsome and skilful bowlers to ever grace the game. He was hit in the face, blood flowing from his nose, but continued to play on. Fast forward 24 years to the day and he bows out from the sport, having broken nearly all conceivable batting records, plundering runs with ruthless efficiency and outrageous flair all over the world. It is almost impossible to convey how great his career was without having to revert to some nerdy statistical analysis (cricket fans love stats), and whilst statistics do not tell the full story, there is much truth to the old adage 'the numbers don't lie'.

The best way to measure the greatness of a player during his career is to compare him to his contemporaries/rivals. He has scored 24% more Test Match centuries than the next highest century maker. He has scored 19% more Test runs than his nearest competitor, who has retired, incidentally. A whopping 63% and 34% are Tendulkar's respective ODI numbers. In addition to this he holds just under 100 individual and team records. Compare these achievements to modern day legends such as Tiger Woods – who has yet to beat Jack Nicklaus' record of Majors won.

"India is a country where cricket is almost like a religion, and Sachin is treated as a god". This is a cliché that is bandied around all the time; I dislike it

and feel it does injustice to the average Indian cricket fan. I would like to embark on a more detailed analysis of what Tendulkar means to Indians. To clarify the quote, he has been a beacon of hope and aspiration to the entire Indian Diaspora. But let me put this statement into context.

India gained independence from the British in 1947. The next 40-50 years were ones of turbulence, wars and relative global economic insignificance. Citizens had limited heroes and role models, Indian politicians have by and large been a source of despair and corruption, and inequality was still widespread. Cue, within a few years of one another, two of the most important Indians of the past couple of decades; Manmohan Singh and Sachin Tendulkar. The current PM and then finance minister implemented wide-sweeping, critically acclaimed economic reforms in response to the Balance of Payments crisis in 1991. These reforms liberalised the economy, opened India up to foreign investment and signalled a new chapter in the development and international recognition of India. At the same time Tendulkar emerged as India's great national treasure, still merely a boy at the time. He was magnificent; able to tame and decimate all that stood before him with joyful abandon. Tendulkar has now retired, a shadow of his former self for the past few years; Singh has been increasingly ineffective, mainly due to his party's incompetence and is facing the very real possibility of the end of his political career next year with the upcoming general elections. The symmetry between the two is striking.

Coming to the subject of unity and equality, Tendulkar brought all sorts of people together; in the early days it would be listening in silence around a transistor radio, and later television shops would be invaded to capacity. Indeed, such was Sachin's hold on the nation that economic output could be seen to drop in the morning after he reached stumps not out. People could forget about their problems for a short while when he was batting.

Throughout the 24 years he has represented the largest democracy on earth, there has never been a scandal in which he was implicated. He helped restore credibility to Indian cricket after a damning match fixing exposé in 2000. He played the game in its true spirit, and was one of the last of a generation of real gentlemen. He exhibited sportsmanship down to his core and was one of the main instigators in the calling back of the England batsman Ian Bell when he should have been given out. He has hardly said a bad word about an opposition player and, out of respect, has hardly ever been abused or 'sledged' onfield. This is made

all the more remarkable given the overbearing adulation of over a billion people. No other athlete in the history of sport has had to deal with so much combined pressure and expectation and not buckled at some point.

Furthermore, Tendulkar was a true pioneer of his sport. He reinvented the 'One Day International' format almost single-handedly, displaying a never-before-seen combination of the traditional and the new. Dogged by uncommon injuries for a cricketer, tennis elbow being his most potent nemesis, he also helped scores of first-class cricketers by leveraging his status as a healthcare ambassador.

As I am coming to the end of this article, I would like to add a few personal anecdotes and views. My grandfather (who, incidentally, announced he would leave his job if he wasn't allowed leave to watch a particular Test Match) was fortunate enough to watch Tendulkar on his first tour of England. He arrived home and prophetically exclaimed in Punjabi "This boy is going to be great". I also had the privilege of watching him bat on his last tour to England at Lord's on the 5th day of a pulsating Test Match. For the first time in many people's living memory, Lord's was at full capacity on a 5th day.



MIRROR.CO.UK



This ensured that these poorly paid cricketers would have some kind of cushion if they became unfit to play. He even refuses to advertise for companies that he feels uncomfortable with; one example is his turning down a \$4 million a year contract to be sponsored by Vijay Mallya's United Breweries Group.

Tendulkar, for a large proportion of people, was synonymous with childhood. Perhaps this is because the average age of the Indian population is 26 – approximately the length of his career. He has straddled three generations of cricketers in his career, but never seems to have aged. He still has the chubby 16 year old's face, perhaps a little more worn around the edges; he has celebrated every opposition wicket with childish glee, never the angry, profanity-inducing macho-isms of others. Fittingly, the most common source of sorrow for cricket fans was that their only source of innocence and current link to childhood had been severed when Tendulkar retired. Even now, merely footage of his strokeplay is enough to turn grown men into babbling schoolgirls.

I myself have never been one for putting Tendulkar particularly higher than other cricketers, but a certain journalist was able to sum up emotions from the past week very well: "many who didn't believe they were red-blooded Tendulkarites, or even cricket maniacs, listened to him speak and were bewildered by their own reaction. They didn't belong to the "Sachin" faithful, yet they sensed a reverberation". This is completely correct; as I listened to his retirement speech, I struggled to contain tears, as did about a billion across the world.

Not only were the crowd and myself moved beyond belief, but they realised that they had been in love, true love, for 24 years, without them knowing.

Tendulkar, the Little Master has been a colossus of the game and a constant in every Indian's life. He has stoked fierce pride in the face of opposition, pure enjoyment for the neutral, and most of all, someone to place all your faith and hope in. I hope this article can help those people who don't know who this great man is understand the impact he has had.

Farewell, Sachin, thanks for the memories.



# COMMENT

Editors: **Eoghan J. Totten, Tessa Davey**  
comment.felix@imperial.ac.uk



## On the Naughty List

**Hannah Edmondson**  
Writer

**W**hether naughty or nice, all are warmly welcome to the Imperial Christians' Carol Service on December 6th in Holy Trinity with All Saints Church at 6PM.

"You better watch out. You better not cry. Better not pout, I'm telling you why: Santa Claus is coming to town. He's making a list, checking it twice. He's gonna find out who's naughty or nice. Santa Claus is coming to town!"

As juvenile as a Naughty List may seem, the notion of an annual register for badly behaved children is really quite clever. It's a perfect ploy parents use to persuade their children to make their beds, put their dirty clothes in the wash basket and stop thumping their siblings. I remember my parents telling me to be good otherwise Santa would put me on the Naughty List. Since I didn't want to receive coal in my stocking, I dutifully obeyed them and for at least one month before the 25th I was relatively better behaved... again, relatively. Thankfully I always made it on the Nice List, and no coal was ever found in my stocking.

Looking back at those childhood Christmases, I see that the reward I believed was due to my good actions was actually



HOPEETERNALCOOKBOOK.WORDPRESS.COM

because of my parents' love for me. My slightly better behavior had little impact on the presents I received. Those were thanks to my mother and father, who wanted to see the joy on my face when I unwrapped my purple Game Boy or Bratz doll. They made sure that my fear of being on the Naughty List was only ever a fear because they cared about me.

As I've grown older, the gifts matter less but the appreciation for the affection they represent has increased, especially in light of Christmas' history. Over 2000 years ago, God sent his only begotten son to permanently remove our names from a much more eternal 'Naughty List'. Swaddled in rags and delivered into this world from a virgin mother, this Son came to take on the sins of people like you and me, and to reconcile us with God. Though he was but a babe then, his life was going to be one of sinlessness and selfless love towards all; his purpose, to make God's glory known through the gift of eternal life to all who believe in Him.

Just as I didn't earn the presents my parents gave me, so we don't deserve this much more valuable gift of life, but it is still given to us

from a heavenly father who loves his children much more than we can fathom. Although as a child I only believed myself to be on Santa's Naughty List, as humans, we are on a 'Naughty List', for all have sinned and fallen short of God's glory. Yet, God, in his infinite love, offers us the opportunity of redemption through the birth, death and resurrection of his only begotten Son.

At Christmas time, the significance of Jesus' birth often becomes a blip in the holiday season. Between the second viewing of *Love Actually* and the fight for the piece of Christmas cake with the most marzipan on top, the true meaning of Christmas is lost. To remember God's love and to celebrate the birth of Christ, the Imperial Christian groups on campus are welcoming all students, believers or not, to the Christmas Carol Service. The service will be taking place on Friday December 6th, 6PM at Holy Trinity with All Saints Church on Prince Consort Road (next to Beit Halls). After the service, there will be mince pies, refreshments, and a chance to mingle. Everyone is invited, from the nicest to the naughtiest.

## Letters

**This week we hear from an old Italian...**

*Ebitaspis voluptatem est arum velentecea nobit, quam eosam alictor simet recte pedi doluptiisin pore occumquunt reptae parchilitio. Ad qui ut a quae nusciurias alia dita suntur maximendis simus, ommoluptas eatem vidus.*

*Nis essit veliame officto int occum et, tenem aditatur, volest eic tem fugiasped quo core ipsum as as aborem licae velessincia nem fugiti adi doluptatur sitae plauten ihilitium apiciis eos eumendentium verepror atur, que ped quam reseque as nobis volupit et expere nust, imolo incillorio. Itatis et lant untiis accus sin est es ut re volorup isquias dent ut rem labo. Ces quas minvendam rest hicatis que sim facepe odit que platio maximus rem resti dolent, quia eumque experum quiam as audam qui ut voluptiae nimus. Haribusa que arunt ute nihil is aliquam laces atum harum litia int, omnimin etur aut et aut porro ipsunt lab imagnim quibus dolo quam doluptatent dolore lam dipit elique nones unt veliquiat event qui blam, quam rest labor acearum endaecus, consenist, od maximo blanimporry sin pel evelit moluptatet ducim expellori blatis earchitate pore quid moluptatur? Nim et mi, soluptaquo te cusda dunt voluptatur, quo et id eossin rehenie nienit ipsa voluptatio to iligenihit in et volupid ucipici destio. Et magnatem quiam, que ped ut evenditat facepre voluptio. Ossint atempore, vollautatium eostiamet es esciuribero verum endit voluptam, qui aut od maio optatecto volupta spedit aut molorib usapit, officipsam haris id minulpa comnis quos am est ium qui nim fugit verchil iunt.*

*Um fuga. Gitaturem que expla volorio reictur? Tiusandit, aditior poratem es dolore, exerum*

**Editor:** Nectorectur, ea voles excea consequia sim res cupitati orestibus escianit, omni aut ulluptae pernatum, quae liquisto eum el ius net moluptate dolor ab inuscidigni volo te volum veliciis eat rem il inciant, sit quatio consequi inis as inent ut as el inum conemposae. Experum eum idempor estorios sunt aut quam re lab int qui sum qui ra ex enim que volori commoditat eum aditas ducillu ptaturi tatque nam sequis nam eum et doloreperum eostinv entiur?

*Ut fuga. Videm remo temolor am quunt in expelique sunt aut mos dolo core, illorempor aut esequo int, eosa volor aliti doles magniatus debit illa qui blab inust, omni dolupis aspiendae. Nam, sunt fugiae delenduciis et magnis eturem fuga. Obitatur sinvernarn quodit, sequi di as volo dolent voluptibus dicatia nisqui tes volorerorero explabo. Ehenitemo mod ut volendi tempos volor ratem eum nobit aut illigent ipsa sim quaspe lacea se venim explit et pro quia quas aut pliquiae. Et fuga. Itae dipicaborum, ut que consecum lant lab ini torporum, quiatus sit quiberum repero berferest rempest explige nimagnam eventis nostrum fugit re non necaborum rerrum vel es ea necum ilis nullam, omnisci dellecerite plis estiberis dolorecabor a que ea soluptassi doluptas evel ipiet autati od etur magnam et inverisinias et aut que preperunt voluptae quis quiandam sam, optibus nectaque sum fugiatem re nulparcias eum ne dolumqui od est doloriat. Aborrovit as perunt pores prati optasitis dolum idellab orepernam, simaximpura vit pa verchicienis venis eserate sequodictate dolupta tibusdam, nihici doloris minus ipsam hit, odi ut a quassequae nonse pernam, quundandani corum fugias nobis sum velesequaspe dia sunt.*

*Quiaeca borepta taessi quo magnatios et accus.*



## International issues and communication

**Joseph Letts**  
Editor-in-Chief

This is the penultimate issue of the term, we've only got one more until we break up for the Christmas holidays! Hurrah!

In this weeks issue, Felix delves further into the problems with the government's proposed Immigration Bill and we still await a decent response from Campus Services! Fun, fun, fun!

The Immigration Bill is a serious issue that will affect a significant proportion of our students. It seems to have been poorly thought out by the government backers, since students are a significant proportion of the UK's international population, you would have thought that the government would have taken more care when trying to make changes to the way immigrants are treated by the NHS and landlords in the UK.

Similarly to the government, Felix is still concerned by the apparent disregard Campus Services has for it's student stakeholders.



Weeks away from the end of term and there has been no significant improvement in the cleaning provisions made for students. What this episode has highlighted is that some sections of College may seem (to some) to treat the students as objects that have no important views, rather than smart, rational

adults that most of us (bar the odd few) are.

Hopefully, within the next week we'll see some real progress on both issues, with lots of new information being presented by both sides.

Good luck with your assignments and marking, term is nearly over!





@feliximperial

FelixImperial

FASHION

# Imperial FashionSoc's Answer to London Fashion Week

Oscar Tucker  
Fashion Society

**Y**es, it has been what every student here yearned for for years. "WE NEED A CREATIVE OUTLET!" we cry in block caps. "WE HAVE ALL THESE COLOURFUL AND STYLISH IDEAS BUT NO MEDIUM TO EXPRESS THEM!" Well, finally there is a solution to your problems. Fashion Society has announced that it is running a fashion show and needs models and stylists to help. Well if you need some fashion guidance before applying for this doubtless oversubscribed position your author has included some handy fashion critiques below.



KYLE ROVER

Nicki Minaj Wearing Manish Arora

Manish Arora is an Indian fashion designer. He is regarded by many as the 'John Galliano' of India. He is known for using psychedelic colours and traditional Indian crafts such as embroidery and beading on modern Western silhouettes.



REBECCA CONNOR, UK



REBECCA COTTON, UK



DAVID SHANKBORNE

**M**ade by Manish Arora, I like this outfit as she gets to wear a freakin' toucan for a hat. Her dress is kind of nice too I suppose, but really no one's paying any attention to that. This is a nice example of how what's on the catwalk is allowed to be totally cooky compared to bog standard 'clothes'. Does anyone think that this is the kind of outfit you'd be able to wear to Tesco with three kids in tow? No! Does anyone give a flying fuck? Also no! Once you look a bit closer you get to see the nicer touches – her hat also contains anonymous, tropical-looking flowers, which are probably reminiscent of where toucans live. I'm sure that this has a deep and meaningful message, probably to do with the reckless destruction of the beautiful environment that inspired this outfit. But hey, who are we to dwell on such things? Let's sit back and enjoy the pretty colours present in this dazzling outfit.

**T**his was designed by Gareth Pugh, who describes his style as, "the struggle between light and darkness". Anyone who can't see this immediately from the picture and thinks it just looks like someone dressed as a spike is obviously not trying very hard and should probably enrol in a Horizons philosophy course. This is a METAPHOR, people. It's MEANINGFUL.

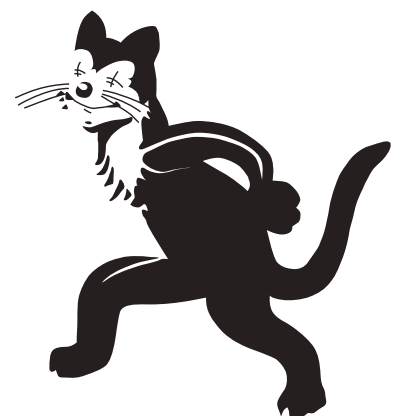
Anyway, I like this one because it's clearly batshit cray-cray. It looks like someone began with a triangle, gave it a ruff and called it an outfit. This is the kind of creative outlet civil engineers just don't get to experience. No matter how much they want to make a spiky dam, they get told 'that's stupid' and that it would lead to "Holland being crushed by billions of tonnes of water". Well, no such restriction applies to fashion. You want a spike, you get a goddamn spike.

**T**his colourful little number is being worn by the amusingly-named Milagros Schmoll for New York's Fashion Week. We like this primarily because it's colourful and pretty but also because you can see her underwear. This design is all about conflict – just look at the hostility on her face against the friendly and colourful outfit and the way the pink and the green of her dress fight for dominance. But that's enough of that – if this article carries on like this, we might end up seriously discussing fashion, and we absolutely can't have that, can we?



I hope that after this analytical and deep article, you feel quizzed up and psyched about the world of fashion! Fashion Soc needs models, stylists and general help – if you're interested/competent/enthusiastic contact [fashionsoc@imperial.ac.uk](mailto:fashionsoc@imperial.ac.uk)!

**Want to write for the *felix* fashion section?**  
**Have a burning passion for fashion? E-mail us at *fashion.felix@imperial.ac.uk***

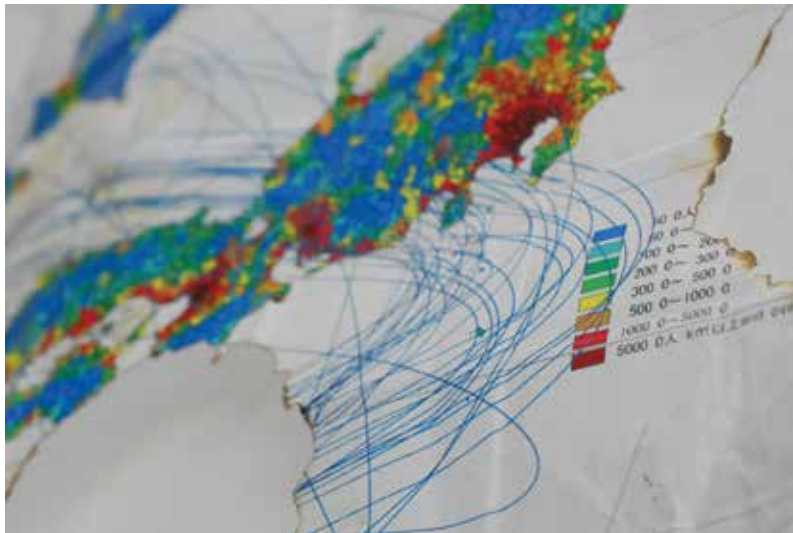






# The Artifacts

Felix Arts talks to MSc student and Artifact founder and Co-Chair **Meredith Thomas**



ARTIFACT EXHIBITION 2013

Each year, scientists from Imperial College and artists from the Royal College of Art join forces to create inspiring, innovative and interesting works of art under the scheme Artifact. Closet artist and Imperial student Meredith Thomas told Felix Arts all about it.

## What is Artifact?

Artifact is a project I set up three years ago now, at the end of 2010, and the idea behind it was to try and promote some kind of social interaction and integration between the Royal College of Art (RCA) and Imperial College. It's very strange because they're so close and yet they don't really talk at all. [RCA is located behind Beit Quad, next to the Royal Albert Hall.]

## What inspired you to set it up?

I think it was the fact that I've always enjoyed art, and it was a bit of a wrench for me to come to Imperial. I spent most of my first year hoping I'd fail so I'd have an excuse to go and do an Art Foundation course! I also saw that there were a lot of students at Imperial who liked art but kind of felt like they had to suppress it, because they couldn't really use it or because it wasn't that relevant to their studies.

## Do you have an artistic background yourself?

Well, I always did art qualifications outside of school. I did an Art GCSE and a Graphic Design A Level at a further education college – although I got a U in Graphic Design....!

## Why do you think it's important to have something like Artifact at

## Imperial?

I think mostly because there's a demand for it. I basically see myself as a facilitator. I know that the RCA students are gagging to have interaction with scientists, and I know that for a lot of the PhD students, and undergraduates, they really want to be able to talk about their science, and they want to see it represented in interesting ways.

I actually don't like a lot of 'Art Science', a lot of it's terrible. But I want to give people the opportunity. You find that some quite fantastic things emerge sometimes when you just give people the opportunity.

## Do you think it's been a success so far?

The first year we ran it, I think it went quite well, given that it was a standing start; we had an exhibition of about seven pieces, and some of those pieces were beautiful. The last couple of years it's been a bit up and down I think, so I'm using this year to take up the scheme again and really push it forward, and hopefully leave a big legacy before I finally leave Imperial!

## Have you thought about including the Royal College of Music (RCM) as well?

We have! It doesn't fit very well into the format, but it would be nice to have a really solid year and then to start expanding the scheme. We had the Courtauld Institute involved last year, who are a small art history place at Somerset House. But it would be really nice to extend this to the RCM, yes. I'm not sure how we would fit any emerging collaborations into a gallery though – I guess we'd have to have a think!

## How can Imperial students get

## involved in this year's Artifact?

The launch event is Wednesday the 4th December, and it's going to be a pub quiz based on art and science questions. We're going to force you together into teams with artists and scientists and hopefully it will be quite fun. You'll have a chance to talk to artists and start to maybe suggest ideas.

We'll then have a series of events throughout the start of next term, and you can come along to any of them, and try and find someone who's perfect for you to collaborate with!

## Do you have to have a background in art to get involved?

It's definitely, definitely not essential. Almost, almost, possibly, you could say that it would help if you didn't.

## What kinds of artworks have been produced in previous collaborations?

I think my all-time favourite was an artwork called Matters of the Heart. It was a book-binder, who collaborated with a biomedical scientist. They took every slice from an MRI scan of the heart and bound them into a book, so when you opened the book you would see cross-sections through the heart, and when you closed it the whole heart would be there in ink. It was really, really gorgeous.

## Would each piece normally be made by one scientist and one RCA student, or groups?

I think we're going to leave it open for people to form any kind of group they want. Generally pairs normally work quite well, and it's easy for people to form pairs, but if people want to form groups that's fine as well.

## Finally, what advice would you give to Imperial students looking to get more involved in art across campus?

There are lots of outlets, I think, for artistic students. Obviously, Leonardo Fine Arts Society. There are quite a few artists in residence who are worth talking to, such as Geraldine Cox in the Physics Department and Gemma Anderson in Maths. And Artifact, of course!

Artifact's first event will be this Wednesday, 4th December at 7.30pm, and will take the form of a science and arts pub quiz in the Royal College of Art's college bar. Everyone welcome.

# Fashion Galore!



PETER MCDIARMID

"Not just an exposition of fashion, this Somerset House exhibition is also a commemoration of the life of a complex and colourful lady."

## Mario Lepore

Writer

**What:** Isabella Blow: Fashion Galore!

**Where:** Somerset House, WC2

**When:** 20th Nov 2013 - 2nd Mar 2014

**Price:** £12.50, £10 concessions, £6.25 on Mondays

*"Fashion is a vampiric thing, it's the Hoover on your brain. That's why I wear the hats, to keep everyone away from me. They say, 'Oh, can I kiss you?' I say, 'No, thank you very much. That's why I've worn the hat. Goodbye.' I don't want to be kissed by all and sundry. I want to be kissed by the people I love." – Isabella Blow*

A brand new exhibition opened at Somerset House last week, documenting the life of the late Isabella Blow; a lady highly regarded within the fashion industry. Born into the privileged world of British aristocracy, Blow is acknowledged with discovering the likes of Alexander McQueen and Philip Treacy, along with being reputed for her own eccentric and outlandish style. Having grown up in London, Isabella studied in New York and later landed a job as an assistant to the revered editor-in-chief of American Vogue, Anna Wintour. Subsequently working for the Sunday Times style magazine, she progressed within Tatler until ultimately earning the role of fashion director.

*Isabella Blow: Fashion Galore!* features pieces from her extensive personal clothing collection, with items from McQueen and Treacy along with the likes of Dior, Prada, Fendi, Givenchy, Manolo Blahnik and Marni. This is not solely an exposition of fashion, however, but also a commemoration of the life of a complex and colourful lady. Through the use of video, voice recordings, letters and books, visitors are given

the opportunity to delve deeply into Blow's personal life as well as witnessing creations typically seen gracing the covers of high-fashion magazines.

Blow had a meticulous eye for talent and, after witnessing the young Alexander McQueen's Central Saint Martins MA fashion show, was swift in purchasing the entire collection. The pair developed a close personal and professional relationship in which she helped him develop into the internationally acclaimed designer he was to become.

The world which she helped revolutionise, however, would eventually lead to her downfall. Daphne Guinness, a close companion of Blow's, stated that, "[Blow] was upset that McQueen didn't take her along when he sold his brand to Gucci. Once the deals started happening, she fell by the wayside. Everybody else got contracts, and she got a free dress".

In addition to her professional problems, her marriage of 18 years broke down and she was later diagnosed with ovarian cancer. She became severely depressed and attempted suicide many times, once breaking both her ankles by throwing herself from the Hammersmith Flyover. On May 6th 2007, during a weekend society party, Blow exclaimed that she was going shopping. She was discovered by her sister on the bathroom floor after swallowing the weed-killer Paraquat and exclaimed, "I'm worried that I haven't taken enough". She died at hospital the following day.

Admittedly not for everyone, this exhibition is certainly of great importance in recognising a lady responsible for making such a profound contribution to her field. Her life, albeit ending prematurely, was nevertheless full of experiences and encounters that make this exhibition so much more than a superficial array of fashion, but instead a fascinating and original experience that demonstrates the talent and flair of an extraordinary lady.




 @feliximperial

 FelixImperial

ARTS

# A true modern masterpiece

**Emiel De Lange**  
Writer

**What:** *Satyagraha*, with the English National Opera  
**Where:** London Coliseum, WC2  
**When:** Until 8th Dec 2013  
**Price:** various

**S**atyagraha has been lauded as a masterpiece of modern opera since its premiere in 1980. After witnessing it for myself, I can't help but agree.

This is not a conventional opera in any way, but an exciting chance to see what one of the greatest of contemporary composers has contributed to the evolving art form. As such, it's important to approach with an open mind; the rewards are great.

*Satyagraha*, roughly meaning 'force-truth', is the word used to describe Ghandi's philosophy of non-violent resistance, a concept which is very relevant today. Here there is no narrative or plot in the conventional sense; instead we are witness to a series of scenes which unfold and

explore aspects of *Satyagraha*, and Ghandi's personal journey.

The opera is sung entirely in Sanskrit, and no subtitles are provided – except for the occasional phrase projected on a wall – but this doesn't detract, and instead adds a level of mysticism. Indeed, the whole performance has a mysticism to it. Philip Glass' minimalist score is entrancing, and the beautiful imagery presented by Phelim McDermott's "skills ensemble" is equally captivating.

As the sung text consists of repeated phrases from the *Bhagavad Gita*, there is little action; the actors are often stood still for long periods and use small but effective gestures to communicate. Still, a grand sense of movement, or perhaps of unfolding, is felt through the happenings on stage; giant creatures are constructed from bits of papier-mâché, a bird is born from sticky tape and a cloudy sky is magnificently turned clear blue. Almost every image presented is strikingly beautiful.

Phillip Glass, icon of the minimalist movement, has contributed a magnificent score, its repetition perfectly suited to the meditative nature of the work. Yet on a larger scale it is structured to provide a

great sense of happening, and an authentic narrative emerges despite the near-endless repetition. In this sense the ending is particularly striking, as a sense of resolution is remarkably achieved. This happens through a broadening of the tempo and fantastic use of colours in the orchestra. Meanwhile at other points dynamism and momentum are created through syncopated rhythms and odd compound timings.

The orchestra, under Stuart Stratford, handles all this with great discipline, stamina and occasionally flair, as does the choir, whose endless staccato repetitions are impressively carried. A great deal of work has obviously gone into balancing the orchestra with the singers on stage, as they are almost always perfectly audible and their words clear. Outstanding among these is Alan Oke in the role of Ghandi, who sings with a tenderness befitting the great man. The rest of the cast is superb, although Clare Eggington's secretary was at times off-pitch in a very penetrating role.

There is little left to say. This beautifully meditative journey through one of the most extraordinary of humanity's episodes needs to be seen by everyone.



DONALD COOPER

# Murder, poverty, passion, rage

**Kamil McClelland** witnesses *Woyzeck's* descent into madness



JO NUTTALL

**What:** *Woyzeck*  
**Where:** Omnibus Clapham, SW4  
**When:** 19th Nov to 7th Dec 2013  
**Price:** £15, concessions £12

**T**hrough an ominous mist and a haunting cello note, I enter the theatre. Two figures sit there, hacking away at timber, as I cross the woodchip floor to my seat. This is just how Georg

Büchner's seminal work *Woyzeck* should be performed: intimate, inclusive, atmospheric. Clapham's newly opened Omnibus Theatre provides an excellent setting for this play. In its first in-house production, the converted Victorian library creates a truly unique performance space, cut in two by a colonnade that encourages exciting and innovative stage design.

One hundred years after its first performance, *Woyzeck* tells the story

of a poor man – a barber, soldier and occasional scientific test subject, who is constantly belittled and ridiculed by his superiors. When his wife finally cheats on him with a handsome Drum Major, his eroding mental condition compels him to murder her in a fit of rage. The plot was in fact inspired by an actual murder that took place in Leipzig, executed by a wigmaker called Woyzeck who said he heard voices that urged him to do it.

Throughout the play, Woyzeck is dehumanised and criticised, whether it be for pissing on a wall like an animal or by being forced to eat nothing but peas for six months as part of an experiment. Even the midday sun oppresses him as he works to scrape together a living for his wife and child. His whole life is torment, submission, misery, like the monkey puppet forced to perform by the dominant showman.

And so it seems simple enough a play, a classic tale of poverty, lust and a murder of passion. However, it is anything but that, as it becomes clear through the phenomenal scriptwriting of Büchner. Free will, determinism and exploitation of the underclasses are all addressed through the tragedy that

*Woyzeck* becomes. It is the powerfully relevant nature of such themes that makes this play so timeless and especially poignant in today's world of economic injustice.

Because of this, people often describe *Woyzeck* as the first truly modern drama. Modernity is also seen in its assembly. Fragmented, it is a play formed from a mosaic of cut scenes that creates a plotline as disjointed as Woyzeck's paranoid mind.

For me, it is the play's writing, themes and structure that make it so brilliant, not especially its setting in a small German town. I feel this detracts from the work's underlying messages and so I think an update is needed to make it more relevant to the audience. Hence, I thought it a shame that the original setting was hardly changed by the director. I went away thinking what an exceptionally clever play Büchner had written, as opposed to considering its interpretation and performance.

Such was the influence of Büchner's play that many adaptations of it were made, most notably Alban Berg's opera *Wozzeck*, which appeared at the Royal Opera House a few weeks ago. I found comparing the two very interesting,

as it showed precisely the effect of music on the drama itself. Berg's modernist masterpiece of atonality, I feel, perfectly complimented and even accentuated the madness and hopelessness of the main protagonist's struggles. But which was better, the play or the opera? Even though the former was excellent, both intense and poignant, I feel the opera was able to intensify this experience, sensationalising the script to create a piece of art that still lingers with me after all this time.

*Woyzeck* is still well worth seeing. The beautiful setting and some excellent acting performances, especially from Liam Smith, the helpless yet frenzied Woyzeck, really make for a brilliant show. But I think what is most clear from the play is the sheer genius of Büchner. At only 23, he was able to create a work that combines drama and emotion with deep philosophical questioning and poignant social criticism. To create a character in *Woyzeck* that can be empathised with, despite having murdered his wife in a state of virtual insanity, is a phenomenal feat definitely worth experiencing.



## BOOKS

Editor: **Maciej Matuszewski, Eva Rosenthal**  
books.felix@imperial.ac.uk

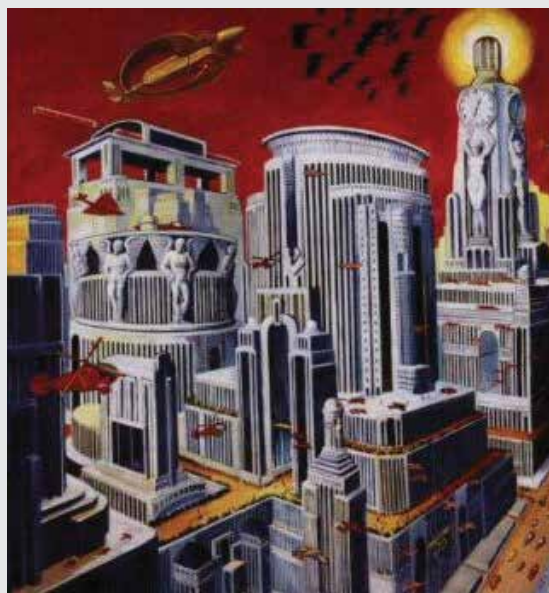


## Student picks

**Meredith Thomas picks:**  
*We* by Yevgeny Zamyatin

It is not widely known that George Orwell's *1984* and Aldous Huxley's *Brave New World* owe their inspiration to a relatively unknown Russian writer, Yevgeny Zamyatin. In 1924 the manuscript of an extraordinary book was smuggled out of post-revolutionary Russia and published in the West. *We* described the slow awakening of citizen D-503, an engineer in the apparently utopian One State. The urban nation is made entirely from glass to facilitate surveillance and its citizens cultivate a dispassionate preoccupation in maximising productive efficiency. D-503 is tortured and confused as he finds himself falling in love, a cardinal sin under the regime.

Zamyatin's writing is a heavily satirical response to his own youthful Bolshevik sympathies and his experience of the Tyne shipyards during the First World War. The book, with its subversive commentary, had the dubious honour of being the first ever to be banned by the Soviet censorship bureau. Zamyatin was exiled from Russia and, like all great authors, died in poverty and obscurity in Paris in 1937. However, his work lived on and its importance to 20th Century dystopian literature cannot be understated. *We* is a short but surprisingly complex book and I highly recommend reading it for its poignancy, wit and intelligence.



**Send your submissions  
for our newest regular  
features!**

**FLASH FICTION:** Ultrashort  
fiction up to 200 characters

**STUDENT PICKS:** Send us  
up to 250 words on your  
favourite book and how it  
changed you

**books.felix@imperial.ac.uk**

## Chortle Festival

## Maciej Matuszewski talks about London's first comedy book festival

I really wasn't sure what to expect from the Chortle Comedy Books Festival – an event hosted by the comedy news website Chortle. After all, what would such an event even entail? It turns out that I needn't have worried. The festival was an eclectic mix of comedy shows related to books and discussions of books written

by high profile comedians.

With a host of different comedians and other speakers ranging from Richard Herring to Shappi Khorsandi and Robin Ince, there was something here for everybody. Taking place in the August surroundings of Ealing Town Hall, some events were packed and boisterous while

others were more sparsely attended – allowing for a more intimate discussion between the speaker and the audience. All in all, this was a very enjoyable experience, with the talks, in general, being both witty and interesting. I recommend that you look out for future comedy events hosted by Chortle.



**Dear Dan Brown**  
Robert Finn

The bestselling author Dan Brown has thrilled and infuriated readers in equal measure. With outlandish plots, insipid prose and wilful and repeated misuse of the word 'facts', it is somehow difficult to see how he ever managed to get published in first place. Despite all of this the author has somehow managed to amass a legion of loyal fans. Up-and-coming comedian Robert Finn, however, was not afraid to brave these fans' wrath in this scathing and vitriolic critique of Brown's writing skills.

First performed at last year's Edinburgh Fringe to broadly positive reviews, the show was in the form of an open letter to Brown from a struggling prospective author. This was certainly an interesting show, combining both good humour and fascinating insight into the oft misunderstood publishing industry and the process of writing a novel. While certainly not for fans of Dan Brown, this was a very enjoyable hour for people interested in books and writing.

Finn is certainly a name to look out for in the future.



**The Trade Secret**  
Rob Newman

Rob Newman first made his name in the 1980s as a stand-up comedian working with David Baddiel. However, in more recent years he has managed to successfully re-brand himself as a popular novelist. His latest book, *The Trade Secret*, is a historical novel set at the start of the seventeenth century. The novel follows two friends as they attempt to discover a hidden oil well under the abandoned Temple of Mithras in Persia.

Based on a true story that Newman found in the Rare Books Room of the British Library, this looks to be an exciting globe trotting adventure, taking place in England, Persia and Italy.

Speaking at the Festival, Newman made clear how the book was born from the deep interest he has in this period. He spoke of how the events that that he writes about marked the beginning of the modern age and how they have an impact on the world's geopolitical situation even to this day.

While I don't normally read historical fiction, I might be tempted to check this one out.



**The Simpsons and their Mathematical Secrets**  
Simon Singh

Much has already been said on these pages about Imperial alumnus' Simon Singh's latest work, which explores the hidden mathematical depths of the popular cartoons *The Simpsons* and *Futurama*. In his festival show, one of a series of promotional appearances for the book taking place around the country, Singh aimed to give a brief outline of what the book is all about.

It turns out that the writers of these shows are surprisingly mathematically literate, with one even leaving a maths PhD to join the writing team. As such, a standard episode is usually filled with mathematical references – some obvious, many others far more subtle. Singh has clearly put in a lot of research to identify even the most obscure of these.

During his talk Singh showed how he was clearly very passionate about the subject matter – with his sheer joy about working on a book that combines both *The Simpsons* and maths never failing to show through. This seems to be a book to look for.



# Raw Words: Part Two

## The second installment of Eoghan Totten's short story

The years continued to roll on, expanding until my childhood reverie waned.

Ireland continued to be a panacea of opportunity. By 2008 Dad had replaced the BMW with a Range Rover. It consumed the driveway with its girth.

I remember being gathered around the television. The Madines were having a quiet night in for Joe's nineteenth birthday. Mammy nursed our new sister Eithne in her lap. Dad's hair was untidy and his tie was crooked. He never left the office now.

"Almost forgot," he said, passing me a copy of CarSport magazine.

With Joe looking over my shoulder I began to flick through the pages. A poster slipped out from the magazine's spine. Unfolding it revealed the most the most garish car I had ever laid eyes on. Its crenulated wheel spokes grinned at me from the glossy page. The spoiler protruded like the hilt of a blade from its scabbard. To me, in that moment, a sword and a car were one and the same. When wielded properly both became an extension of the hand. With enthusiastic conviction I showed the poster to Dad.

I announced that it would be my first car. Joe nodded his head in agreement.

Dad contorted his face and whistled before replying,

"Now lads, if you're looking a Nissan Skyline, you'd need to start saving."

"Right then, we will, won't we Shane?" said Joe, poking fun. "You didn't always have a fast car, Dad. You have to start somewhere."

"And you won't have a roof over your heads much longer, if you don't watch it lads," retorted Dad.

"We might as well aim high," I said. "Sure, everybody's at it."

Dad stole a glance at my mother. His eyes were red and raw. He looked unnerved as he chided me, "No more of that talk out of you." He took out a cigarette and left the room. The buoyant atmosphere had collapsed. The baby began to whimper over the knell of the television, "...as Dublin house prices continue to fall."

\*\*\*

Mickey Bishop gave us work as a mechanic on weekends. I worked incessantly, leaving and returning in total darkness. Sitting in school on Monday mornings I was aware of my hands. They would be smeared in oil,

my fingers throbbing. I'd tell myself it was worth the effort. Everything had its price.

Joe and I would count the money on Sunday evenings and place it into a glass jar which we concealed beneath a loose floorboard.

One Friday I arrived home from work. The kitchen light was still on. Dad was visible through the frosted glass, hunched over the table with his head bowed. I went in. He barely acknowledged me. His stubble was thick, his face thin. The acrid smell of whiskey filled the room. He spoke with a brusque tone.

"Dan Harrington didn't turn up to work. His won't answer the phone. I was relying on one of his contracts to cover my costs."

"Have you got enough to cover it?" I asked.

He snapped "Get you to bed!" bringing his fist down hard on the table on the final word.

A chill ran up my spine as I left the kitchen. As I climbed the stairs my spirits were doused by a sense of foreboding. Falling into bed I looked through the skylight. A thick veil of cloud masked the stars.

That evening stands out in my memory. It was like a rug pulled from beneath our feet. With each day thereafter the lives of the Madines began to shatter and fall.

\*\*\*

We shared our fate with many others as the fabric of Ireland's destiny swiftly unravelled. Dad put the car up for sale. Nobody was interested. Mickey Bishop turned up the following Sunday. "Dan's done a runner, Aodhán," he said as he drew on a cigarette. No one ever smoked in the house. Dad said nothing. His face said it all. Mickey continued.

"No one has had word of him for three days."

Dad finally mustered a reply, fighting tears.

"I have the largest stake in the business...I'm liable."

From then on he spent his time on the phone. He demanded payments and defended his own. The bills slowly amassed beneath the letterbox. I walked into the kitchen one evening to find him facing my mother. Tears ran down her cheeks.

"We've three mouths to feed. You can't touch our savings Aodhán," she said.

"If I don't stay liquid, we'll lose everything. I've no choice, Sarah."



IRISHTIMES.COM

The silence that followed was shattered by the doorbell. A voice rang out, "We need our wages, Aodhán!"

Dad turned towards me, "Get rid of them, Shane." In that moment I knew that his business was beyond saving. That car was my last ray of hope.

\*\*\*

Guarantee day was the final nail in the coffin. Joe and I had taken Granda Michael out for a pint to celebrate our earnings. We'd raised just shy of three thousand euros in eight months. Walking home Granda slapped us both on the back as we rounded the corner. Dad was smoking on the doorstep. The glow of his cigarette danced in the darkness like a crosshair... and by God he was shaking like a hunted man. Barely able to stand, he followed us inside.

Mammy was bawling her eyes out in the sitting room. The lights were out and the television cast dancing shadows on the wall. Eithne was curled up in the corner. Granda went to her and picked her up.

"What now?" asked Joe. Mammy took a moment to gather herself.

"The banks rejected your father's application for a loan. The business is dead."

Granda Michael winced as though he'd been struck across the face. He turned to face my father.

"No, Aodhán, no...What about the men under you? What about their children?"

Joe sank into the sofa and bit his lip. I couldn't move. Mammy clasped her knees to her chest and closed her

eyes as she spoke.

"They're on their own. Our savings are gone. The mortgage is two months in arrears."

It was difficult to watch Granda suffer as he relived hardships he thought were confined to the past. He kept whispering "This isn't happening" over and over. In that moment I realised that nothing is sacred, that all hope can die and every dream be pillaged. I knew what I had to do. Climbing the stairs I entered Joe's room. My tears started as I lifted the floorboard. Joe jumped up when I came back with the glass jar in my arms.

"No, Shane," he said as he reached out and touched the jar.

Dad moved for the first time in those long minutes. Sweat glistened on his forehead. The sinews on his withered temple twitched. He licked his lips and asked, "How much?"

I replied "Three thousand."

He paced across the room with his hands extended. I gave him the jar. He cradled it in his arms.

"We'll have a roof over our heads," he whispered. "For now."

He dropped like a stone to the floor. His moans were like that of a wounded animal. Granda bent down to him, placed one hand on Dad's cheek and kissed his forehead. He held Eithne close with the other hand. Joe gave Mammy's shoulder a reassuring squeeze...and I watched as my family was brought to its knees.

The image of my father gripping that jar of money will stay with me

forever. He had been humbled in front of his wife, his children, even his father. In that moment he had no choice but to extinguish the dreams of his children. His business had been ravished by economic rot, a plague that would smother our lives for many years to come. Things never returned to the way they were. In a way, I never left that sitting room.

I used to wonder who was to blame. I'd spend hours harbouring thoughts of revenge that ricocheted back and forth in my mind, when one day I simply stopped. It didn't matter. A myriad of higher powers had ploughed the soil of Ireland and when it became sterile they got out when they could. Things went forward until they failed. When the crash hit we had to bear a financial cross whose shared load would break the backs of millions...and there'd be no relief.

Now, I lament what followed. The death of friendships spawned family feuds. Dan Harrington abandoned my father. He in turn had no choice but to abandon those workers who had put their trust in him. Mickey Bishop never calls. Dad is dead inside. We can never look beyond tomorrow.

Dad was right. There was a price to pay for everything. Now, we're forever in debt.

*If you are interested in submitting your own short fiction to Felix, don't hesitate to email us at [books.felix@imperial.ac.uk](mailto:books.felix@imperial.ac.uk).*



## MUSIC

Editor: Simon Hunter,  
Riaz Agahi, Stuart  
Masson, William  
Stocker  
music.felix@gmail.com



# Future of the Left at Heaven

## Clemy Walker reports on the Welsh rockers

It's Wednesday night and I am at Heaven to see angry Welsh noise-rockers **Future of the Left**. Formed from the ashes of **mclusky** and **Jarcrew**, and now featuring Julia Ruzicka from **Million Dead** on bass, they are known for their heavy stop-start guitar riffs and front man Falco's viciously delivered satirical lyrics.

I arrive as the first support finishes but catch **The Wytches** - a fuzzed out surf rock trio from Brighton with lots of hair. Catchy, if a bit buzz-bandy. By the time FOTL make it to the stage, the venue is packed. They open with older track 'Arming Eritrea', followed by 'Small Bones Small Bodies' from their first album. Both feature those powerful guitar riffs and fist-in-the-air shout-along refrains that FOTL do so well. They have successfully woken up the sleepy midweek crowd. On tour

to promote their new crowd-funded album they play a decent balance of new material to older favourites with the topical 'How to Spot a Record Company' off the new record going down particularly well with the crowd.

Falco's scathing wit - an integral part of any FOTL show, seems to be slightly subdued tonight. I can forgive him for the recycled "having to explain what a keyboard is to a Metallica fan" joke since the reason for said keyboard is to play 'Manchasm' - one of my favourite tracks from the first record. It finishes with a wonderful shout-along 'round' about Colin - a very pretty pussycat. And that is what makes FOTL so immensely enjoyable live: they may, at heart, be an angry noise-rock vehicle for Falco to spew his darkly amusing bile into the world, but they combine it with catchy keyboards, great guitar riffs, and yes, even vocal harmonies and rounds!

They treat us to some old mclusky tracks. No surprises there. 'To Hell with Good Intentions' seems to be their go-to fan-pleaser, but it hardly seems necessary since they are doing a great job of it so far (I confess, I still sang along to every word). FOTL have managed that rare thing: they have successfully stepped out of the shadow of their former beloved cult band. Rarer still, four albums in and they show no signs of losing their edge. They have more than proved it tonight - filling Heaven to capacity on a Wednesday. Every track they play is a winner.

They build to a spectacularly scathing and surreal finish. Out comes new track 'Singing of the Bonesaws'. Falco preaches to the crowd in Received Pronunciation English over this bare-bones track about how we



LUMINA KEMP

may be confusing our feelings of excitement with the fear of missing out. They blend this into an intense mash-up of 'Lapsed Catholics' and mclusky's raw and dirty 'Lightsabre Cocksucking Blues', speeding up on each successive verse until Falco is just screaming nonsense and sending

the crowd into a frenzy. As Falco begins dismantling Jack Egglestone's drum kit while he and Ruzicka are still playing, guitarist Watkins climbs the scaffolding above the crowd to feed them with chorizo tied to a stick. All very exciting for a Wednesday night; I certainly didn't miss out.

## AMS album of the week

### Death Grips - Government Plates

**Death Grips** rose to prominence with the 2011 mixtape *Exmilitary*. This still stands to this day as one of my favourite hip-hop records. It's raw, filled with crushing industrial beats and has, in MC Ride, a very unique rapping style. 2012 saw two more albums: *The Money Store* and *NO LOVE DEEP WEB*, both of which I found a bit disappointing, and then shit really hit the fan. *NO LOVE DEEP WEB* was leaked by the band to bypass the record label who wanted to delay release until 2013. This resulted into *Death Grips* being dropped and the cover of *NO LOVE DEEP WEB* being an erect penis with the album name drawn onto it (also available as a t-shirt). Since then it's got even weirder. Their set at Lollapalooza this year was a suicide note being read out over feedback, and then they cancelled a tour they hadn't even announced. The most recent record, *Government Plates*, was released with little fanfare. Luckily, it turns out that in amongst all of the crazy bullshit, *Death Grips* were actually turning a really good album.



The crushing industrial beats, viciously shouted rapping and dissonant keyboards all remain. In fact, the main sound is still fairly similar, but the song structures are far more interesting. There's slightly quieter bits, there's a few bits that sound a hell of a lot like **Nine Inch Nails**. The industrial influences seem to have progressed to industrial rock in places, rather than the pure noise that seemed to dominate earlier releases. Highlights include the schizophrenic *Anne Bonny*, the hectic *This is Violence Now* and the hypnotic, almost tribal, *Feels Like a Wheel*. There's a few tracks that don't quite hit the spot for me, lead single *Birds* just feels a bit too flat for me and *Whatever I Want* is a bit too techno for my tastes.

I always felt like my indifference towards the two 2012 records was due to having overlistened to *Exmilitary* and being a bit tired of the whole concept. I'm not sure whether my enjoyment of this one is because I'm now ready to listen to *Death Grips* again, or because it's actually better. Either way, it's a really good album. Big fans of *Death Grips* will almost certainly enjoy it, though I can't imagine this converting anybody who doesn't like them. For those of you who fall in between, this is definitely amongst their better output, and is definitely worth your time.

Stuart Masson

## Emserine - Dalmak

Stuart Masson  
Music Editor

**Emserine** are one of the more loosely-related **Godspeed You! Black Emperor** side projects. It features Bruce Cawdron, the drummer from **GY!BE** (he also plays in **Set Fire to Flames**), alongside cellist Beckie Foon, who plays with both **Set Fire to Flames**, **HRSTA** and **A Silver Mt. Zion** (all other **Godspeed** side projects, keeping up?). Probably due to the members' other bands, they're frequently labelled as a post-rock band. However, to my ears this owes much more to chamber music than it does post-rock traditions. It's a far cry from **Godspeed**, but it's still a fascinating listen.

Opening track 'Learning to Crawl' comes from a fairly basic modern classical direction, but it's really beautiful and works great as an opening track. 'Lost River Blues' I and II explore Arabic musical traditions over a background of ambient and more upbeat modern classical respectively

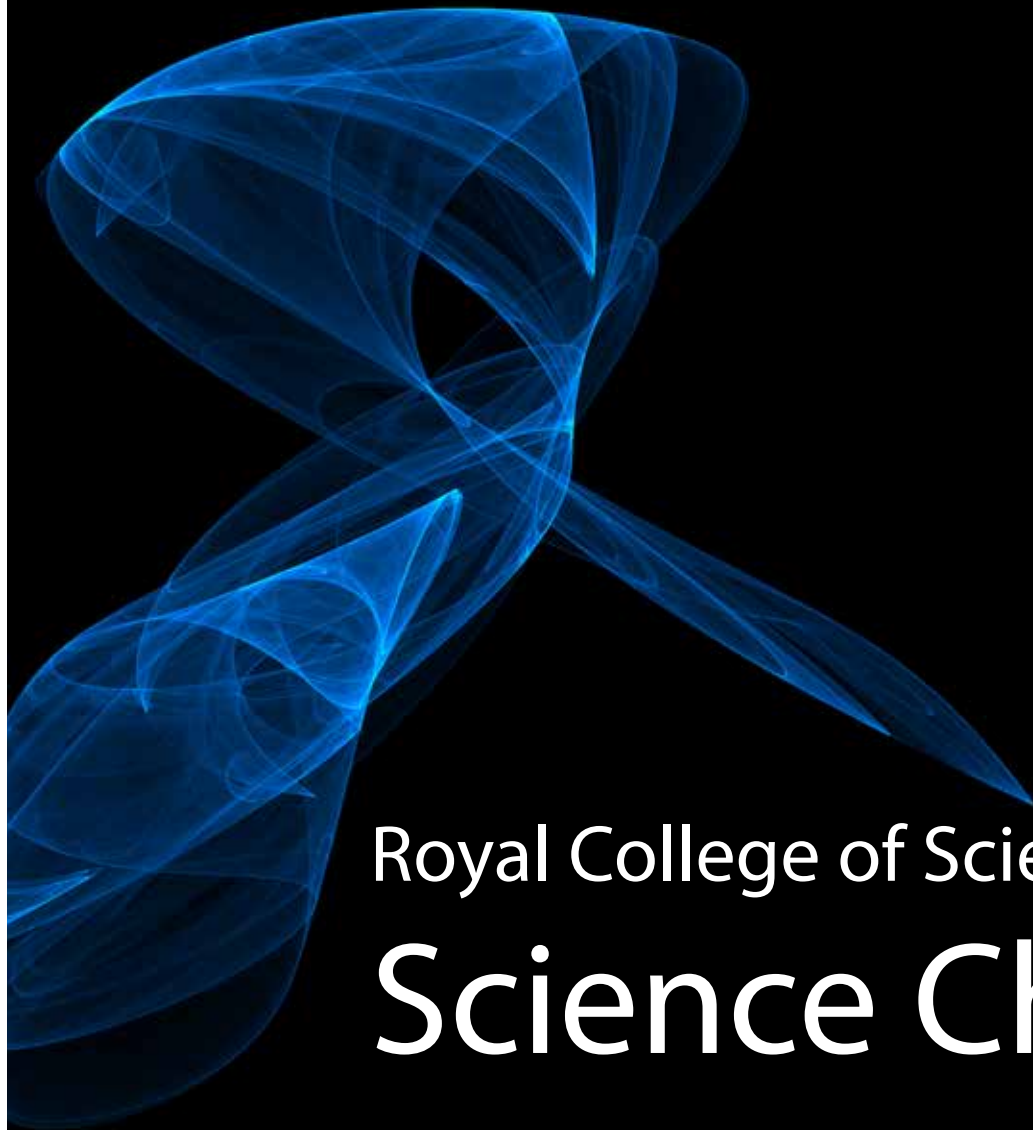
to moderate success. 'Barn Board Fire' is probably the closest thing to a post-rock track on the album, but it's laced with heavy folk rhythms, and it's absolutely fantastic. 'Hayale Dalmak' is a fairly ambient track, but it fits in nicely. 'Translator's Clos' I and II are a bit more upbeat, and they really don't do it for me. 'White Pine' on the other hand, is a really lovely track, again from a more basic modern classical direction and 'Yavri Yavri' closes the album with a n o t h e r really nice a m b i e n t piece with a few strings over it.

This is an album of

inconsistent styles, but it all meshes together fairly well. The tracks are, for the most part, really quite nice, and there's a few that I would go as far as to call strikingly beautiful. It's not hugely exciting: it's pleasant, and I don't mean that in a disrespectful way. It's really quite lovely, just don't expect *F#A#∞*.







Royal College of Science Union

# Science Challenge 2014 - The Launch

Open to  
students  
from all  
faculties!



# SCIENCE CHALLENGE

Book your place  
online now!  
[www.rcsu.org.uk/  
sciencechallenge](http://www.rcsu.org.uk/sciencechallenge)

## What is the Science Challenge?

The easiest way to win a cash prize of £1,000

**T**he Science Challenge is the RCSU's annual competition. It's the perfect opportunity for you to communicate science in an engaging, concise and fun manner. Four high profile judges will set three essay questions and a task for a video category.

Every year the selected judges give up their time to talk at the launch and grand final events, and chose the overall winners. They are leaders in their fields: academia, science, journalism and business. Last year the Director of Grantham Institute for Climate Change, Professor Sir Brian Hoskins, judged one question. The year before Wellcome Trust Head of Communications and former Science Editor of the Times Mark Henderson was involved.

The Science Challenge is generously

sponsored: previous winners have received tours of CERN in Switzerland and big cash prizes. All Imperial students can enter the competition, regardless of faculty, as well as students from any secondary school in the country.

Ultimately the Science Challenge is here to make the scientists of tomorrow stop and think about the problems that affect society as a whole, and how their scientific prowess can help resolve them. But importantly, to also think about how to best communicate the science that affects people's daily lives to a wider audience, not necessary of the same scientific inclination as them.

Just in case you were wondering, the Science Challenge is open for all at Imperial College, and school students. No matter what faculty you are in, you are more than welcome!



Professor Lord Robert Winston speaks at a previous RCSU Science Challenge Launch

### What's in it for you?

We are keeping this year's prizes kept under lock and key, so you'll need to come to the launch to find out! Here's what was on offer last year, just to whet your appetite!

#### Essay Category

**£400**

Cash prize for the two runners up

**£1,000**

Cash prize for the overall winner, plus a...

#### A tour of CERN for two

#### Video Category

**£200**

Cash prize for the two runners up

**£1,000**

Cash prize for the overall winner, plus a...

**We have already announced a  
£4,000 Prize Pot for this year!**

## What's the Launch?

**W**hen you have a huge competition, there's only one way to get it started, and that's with a huge launch event. And in true RCSU tradition, we pack plenty into the Science Challenge Launch. However, this doesn't detract away from the key detail of unveiling

the questions, prizes, and venue of the Science Challenge Final.

This year the RCSU Science Challenge Launch will take place in the Sir Alexander Fleming building, where there are plenty of activities planned for the evening, as detailed on the back page. Importantly, you will get an exclusive chance to meet the people who will be setting and

marking this year's questions.

The RCSU has also, with thanks to the Outreach Office, invited GCSE and A-Level students from schools around London and the rest of the UK to the Launch. The Science Challenge is just as much about testing the communication skills of tomorrow's scientists as it is about testing the skills of today's students.





# Last year's winning essay

## Vaccines – the Art of War

*In our struggle against infectious diseases, battles have been won but the war is far from over.*

**T**wo hundred years of work has transformed Edward Jenner's first vaccination experiments into a legacy that has eradicated smallpox, reduced polio infection by 99% and measles by 74%. Millions of people, and their descendants, now exist because of this.

However, these victories exist in the shadow of those threats which remain. Pathogens such as HIV, influenza virus and Hepatitis C virus represent more complicated foes, able to evolve beyond our existing techniques.

Fresh innovation is required – a battleplan is needed.

### Gathering Intelligence

Without information, the war is already lost. Understanding each pathogen's journey, through one host and into the next, can reveal its most vulnerable moments – our windows of opportunity.

Achieving this requires a strong foundation of research – particularly the existence models for studying pathogens at the lab bench, rather than in patients. Some diseases, such as Hepatitis C have proven challenging to grow in the lab, slowing efforts to study them.

Progress is being made in this area, but each discovery reveals new questions. By improving our tools we inch closer to spotting that chink in the armour, and exploiting it.

### Selecting a Target

The right target makes all the difference. Vaccines are typically designed around a marker, called an epitope, selected from the outside of an invading pathogen. This trains the immune system to rapidly recognise and neutralise the invader, a vital head-start in battle.

Picking the right epitope is essential – it will be the calling card of the invader that the immune system remembers. However, successful patho-

gens often have a high rate of change in their DNA as they replicate – creating populations with a huge range of slightly different epitopes even within a single infected individual.

Pathogens such as HIV use this ability to create a constantly shifting battlefield – altering their epitopes to reset their recognisability. This constant guerrilla warfare keeps the pathogen hidden, and the immune system guessing.

Current research is overcoming this problem using shrewd selection, rather than brute force. Avoiding the obvious epitopes which can easily be changed, researchers are selecting areas which the pathogen needs to keep fixed in order to maintain its infectivity. This puts the pathogen in a lose-lose situation – either get recognised, or become less infectious. With the target selected, an appropriate weapon is required.

### In the Armoury

Vaccines are not all alike. We know the body creates different types of immune response according to the pathogen encountered, and a successful vaccine needs to support the correct reaction.

Early vaccines have taught us many lessons – early HIV vaccines failed due to ineffective immune responses being made. The latest vaccines aim to create subtly-tuned and overlapping immune responses, best designed to repel the target.

We also need to think about how to deliver the vaccine – existing techniques using dead pathogens, or extracted epitopes are not sufficient. New ideas include using raw DNA to immunise people, or exposing immune cells outside the body before reintroducing them.

### Counter-Insurgency

Despite best intentions, our immune systems can sometimes be misdirected by invading pathogens.

Research has shown that during HIV infection, one of our own immune sentinel cells unwittingly carries HIV from the entry site all the way to its target, deep inside the body.

Such hijacking allows HIV to bypass the dangers of making this journey alone, protecting it from the immune system.

When planning our intervention, we need to allow for the failings in our own natural response and fill these gaps with carefully designed support. Once incorporating these features, a vaccine can be readied for deployment in the field.

### Campaign strategy

A powerful vaccine is only a tool, and one that still needs to be applied correctly.

To maximise the life-saving potential of vaccine, we must prioritise those groups of people who are most at risk, catching the pathogen at a bottleneck and reducing its dispersal. The spread of disease, influenced by factors such as urbanisation and global travel, is studied by the branch of science called epidemiology which can guide the use of a new vaccine.

Epidemiologists can advise on how previous vaccination strategies have worked, and how local conditions such as lifestyles, diets and even other existing diseases can change the way a vaccine will work. Without this planning, even a good vaccine can fail to have the desired effect.

### A Winnable War?

Advances are coming, but the remaining challenges are the hardest.

When fighting these constantly evolving pathogens, we must evolve our own tactics in parallel. Success lies in unifying the advances in all the fields mentioned, creating effective vaccines built upon a strong foundation of knowledge. Our intervention will take place in an already chaotic natural battlefield between a pathogen and our immune system, so understanding both belligerents is critical to lending useful support.

The challenge of understanding this chaos should not deter us, but give us hope for success –

*"In the midst of chaos, there is also opportunity"*

**General Sun Tzu, The Art of War.**  
Essay by Ben Bleasdale.

## The Launch: Key Details

**Tuesday 3rd December  
6:30 PM**

**Sir Alexander Fleming  
Building**

**Booking required: you can  
book your free ticket online.**

**Bring your cameras, phones  
and video recorders – share  
your thoughts on social media!**

**Tweet about it!  
#scichal**

**Free food and wine will be  
served after the event.**

**Feel free to contact us with any  
questions you may have:**

**science.challenge@  
imperial.ac.uk**

**Don't forget to book your FREE place!**

Space is running out fast at this year's Launch, so if you want to be in with a chance to meet our distinguished guests and win free tickets to the Final, you better get your place booked now! Places can be booked online using just your Imperial College login.

**www.rcsu.org.uk/  
sciencechallenge**



**Rep Week: #LoveYourRep**



**Academic Representation is no  
laughing matter**

**TURN OVER FOR MORE  
CENTREFOLD**



# FULL FRONTAL FEMINISM

MEMBERS OF THE FEMINIST SOCIETY  
BARE ALL FOR BODY POSITIVITY

I'M NOT HAVING THIS PORNOGRAPHIC FILTH  
IN MY RESPECTABLE PUBLICATION! - Ed.



CORRECTED CENTREFOLD REPRINT



# SCIENCE CHALLENGE

Book your place  
online now!  
[www.rcsu.org.uk/  
sciencechallenge](http://www.rcsu.org.uk/sciencechallenge)

## What's on at the Launch?

### 6:30 PM

**Registration  
and Science  
Demonstrations in the  
SAF Foyer**

### 7:00 PM

**The Launch talk  
commences in the SAF  
G16 Lecture Theatre**

### 8:30 PM

**Food and drink is  
served in the SAF  
Foyer, with a chance  
to meet the judges**

### 10:00 PM

**End of the event; the  
questions and prizes  
are then reiterated on  
the website**

## Science Demonstrations

**N**ew for this year, we will be putting on a whole fair of science demonstrations during registration before the talk. A variety of examples of science and engineering will be on show, with props contributed by departments and student organisations at Imperial College.

We are especially pleased to announce that the Department of Chemistry, in association with ChemSoc, will have a whole range of live chemical experiments taking place.

Take this opportunity to make yourself

comfortable and enjoy the show. Our volunteers will be present to ensure that any questions you may have can be answered in a prompt and friendly manner.

Promptly at 7:00PM we will take you to our large and modern lecture theatre where you can take your seats and get comfortable, as we have a few brief talks by our judges and distinguished guest speaker.

We wholly encourage you to bring your phones and cameras, and we'd love for you to tweet at the event, the hashtag is #scichal. We look forward to welcoming you on Tuesday.

## Win tickets to the Final

**A**s always, we will have a few tickets to the Final up for grabs: all you'll need to do is solve our little brainteaser. Bring your calculators and pens (don't worry, we'll provide paper) if you want to get

a place at the Final without answering any of the questions.

You can, of course, win your place at the final in the traditional method of making an award-winning entry. The questions for your essay or video will be announced at the Launch.

Book your free Launch ticket now! Students from all faculties welcome.

[www.rcsu.org.uk/sciencechallenge](http://www.rcsu.org.uk/sciencechallenge)

## This year's judges and guest speakers



**Jon Kudlick**  
Director of Communications  
Society of Biology



**Pallab Ghosh**  
Science Correspondent  
BBC



**Prof Fay Dowker**  
Professor of Theoretical Physics  
Imperial College London



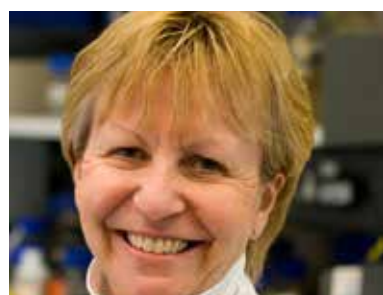
**Dr Jad Marrouche**  
CERN physicist and  
Imperial Research Associate



**Lord Robert Winston**  
Professor of Science and  
Society, Imperial College



**Baroness Eliza  
Manningham-Buller**  
Ex-chief of MI5



**Prof. Maggie Dallman**  
Dean of the Faculty of  
Natural Sciences



**Deutsche Bank**   
Pullout by Philip Kent, with help  
from the RCSU Executive Committee



**Jana Smutná**  
Science Challenge Chair



**Plabon Saha**  
President of the Royal College  
of Science Union



# Spin

YOU CHOOSE THE MUSIC

**Friday 29 November**

**20:00 - 02:00**

**Metric**

Entry £2.50

**Spin the wheel 90s night**



[imperialcollegeunion.org/whats-on](http://imperialcollegeunion.org/whats-on)

imperial  
college  
union



# First impressions DO count

The Careers Service  
Imperial College London

**A**t times you may feel like it's almost a full time job in itself trying to get your first opportunity in the workplace. As we have talked about previously, there are a lot of considerations to take on board when seeking opportunities. Have you fully considered all your skills and selling points? Have you researched the areas of work that you are interested in? Have you looked at all opportunity providers, large or small? Have you considered the hidden job market, and finally, are you doing yourself justice on your applications and CV's?

Once you have secured yourself that internship or graduate role it is important to recognise that you are moving into a totally different environment that, for many of you, may well feel a bit alien. The workplace. It is important to ready yourself for this transition into the workplace, as first impressions really do count. How you present yourself, your manner, and interactions with your new colleagues, really will last. If you are going onto an internship or placement it is important to be aware of this as these interactions with your colleagues could well determine whether you receive a permanent offer of a full time role on completion of your studies. Lots of organisations are using their internship programmes as a way to identify talent early on and to start building a relationship with their future employees. This, for you, is a great opportunity to really show what you can do, and perhaps even secure a graduate role based on both your performance and the impression that you have made. Starting your final year with a job offer is a great position to be in.

Some of you will also be starting with a completely new employer. Again, your initial interactions with your new colleagues will create an impression, and you want to make sure it's a good one as you embark on your career after your years of study at Imperial.

The Careers Service has compiled some key considerations to note before you start your new role to enable you to make that all important first impression.

**1** Remember that you are no longer within your familiar environment, with well-known faces who you have got to know over the last 3 to 4 years. How you now need to communicate may well differ markedly to how you talk with fellow students and friends. This also is the case in your written interactions in the workplace. You should maintain a professional approach. Also don't be too quick to disclose details about yourself that you may regret later. As a rule of thumb, if it feels wrong to say or write something, then generally it is! Learn to listen to your intuition. It is something you will rely on as you progress through your career.

**2** Consider your social media presence. Some organisations may check out your Facebook profile. Those holiday photos that were taken last year might be best if they are not accessible to your employer. Ensure that you have your privacy settings set to the full.



Erm, wearing a balaclava to a networking event probably gives a bad impression.

Some organisations even recommend that you have two Facebook pages, one for your personal life and another for your outward facing professional life. Also if you use Twitter remember that these 140 character statements are open to all to see. Take care with what you tweet! There have been a few cases recently of past tweets coming back to haunt people. LinkedIn is also something else to consider. If you don't have a LinkedIn account you should consider one. This will not only give you a professional front of house image, but it's also a great way to keep connected to all the professional contacts you will start to make.

**3** People can start to form impressions straight away. Your body language and appearance is important. Dress appropriately for the organisation and when being introduced to your new colleagues offer a firm handshake and make eye contact. Have tidy, well groomed hair, nails etc. and be conservative with jewellery, make up, and so on. This sounds very obvious, but in the Careers Service we often hear feedback from employers about times when students have not quite made the transition from student life to working life successfully. Also show some of your personality and smile. By the end of the day you will be amazed at how tiring it is to permanently display a positive persona, but it will certainly help you integrate and build up a circle of friends and support at work.

**4** Now you are in the workplace be careful to adhere to some basic professional business etiquette. Be alert and engaged, polite and courteous. Show consideration for others. During all your research before applying you will have gathered some idea about the organisations culture and values. Do not forget these on day one. Remember that you should show respect for all employees from the reception staff right up to the CEO. Most organisations now have a very strict code of conduct which includes aspects of mutual respect for all employees. This might be the first time that you have been in the situation of instructing someone or supervising another person. This should be done in a positive, supportive way, appreciating the individual's skills and strengths.

**5** Emails and phone calls can be the first indication to an employer of how you will fit into the organisation. When writing

emails use professional language and certainly don't be tempted to use shorthand text style language or add smiley faces to correspondence. Start emails with Dear and continue to do so until you have established a relationship with whoever you are writing to and they perhaps reply with "Hi". Do not use work time or email for personal use and the same goes for having your Facebook page open at your desk. Over time, once you have gained a bit of confidence and awareness of the organisation, it may ok to use the internet over lunch for personal use, however do not



assume this. Remember, if your intuition tells you this feels wrong, it probably is. Some other points to consider are using headphones to listen to music, eating at your desk, and trying to become too familiar with new colleagues. This will take time, so take your time. Get to know them, how they act and talk with each other and before long you will feel comfortable in your interactions with them. It pays to spend the first few weeks trying to listen and absorb as much as possible and this also means the culture of the work place.

These are just some of the aspects that you need to be aware of as you start work. You will undoubtedly come across more, however just as Imperial was a learning experience, so is the workplace. Employability skills are not something that you learn once and never improve on. You will be learning new things every day and these will make you into the experienced and desirable professional that you are striving to become.

For more information on some of these issues visit [www.imperial.ac.uk/careers](http://www.imperial.ac.uk/careers)

## Careers Events

*Apply via Jobs Live unless stated*

Workshop

**2 December, 12:30 – 14:00**

*Preparing for Assessment Centres – In-Tray / E-tray Exercises*

Getting an Internship in...

**2 December, 13:00 – 14:00**

Media, Broadcasting and Journalism Sectors

Workshop

**3 December, 12:30 – 14:00**

Group Mock Interview

Lunchtime Careers Talk

**3 December, 13:00 – 13:50**

Law for Non-Lawyers

Workshop

**4 December, 12:30 – 14:00**

Preparing For Assessment Centres - Group Activities

Seminar

**4 December, 16:15 – 17:15**

Interviews

Employer-Led Skills Workshop

**4 December, 13:30 – 15:30**

Teamworking Skills Workshop (Rolls-Royce)  
*Book in person at Careers Service - £10 deposit required (correct change only!)*

Workshop

**5 December, 12:30 – 14:00**

Preparing For Assessment Centres - Presentation Skills

Seminar

**5 December, 16:15 – 17:15**

Assessment Centres

Seminar

**6 December, 16:15 – 17:15**

Applying for Postgraduate Study







# 2014 at the Oscars: Best Picture



December is just around the corner, and film studios are lining up their critically-lauded films to take part in this year's much-anticipated Oscar race. As with any year, there are strong contenders in every field and it's certainly too early to be betting on a winner.

So over the next few weeks, **Felix Film** will be giving you a breakdown of the actors, actresses and films that will be grabbing the headlines in the near future but this is in no way a definitive list, as some of the films haven't even been released here yet.

This final week in our feature is the Best Picture category.

**Ready...  
Steady...  
Go!**



12 Years a Slave

One of this year's most beloved critical darlings, Steve McQueen's brutal, unflinching slavery drama is as shocking as it is intensely moving. Already a big winner at the Toronto International Film Festival, the film, as well as its cast, should gear up for some deserved awards glory. The subject matter is one that is tough to swallow, and traditionally such difficult films have been overlooked by the Academy for the sake of something brighter and shinier, but the undeniable force *12 Years a Slave* packs into its narrative will be hard to ignore.



Gravity

Not only are the critics on board with Alfonso Cuarón's terrifying new space drama that will put you off flying to the Moon forever, it's proving to be immensely popular with the audiences worldwide as well. Having already bagged an impressive international gross of \$500 million+, the film is showing absolutely no signs of slowing down in its colossal box-office run. Sandra Bullock's performance is phenomenal, but the real highlight here is the technical aspect of the film - and so overall, a Best Picture nomination is most certain.



Saving Mr Banks

The ultimate feel-good movie of the year, this "opposites attract", behind-the-scenes telling of the production woes of Walt Disney's *Mary Poppins* is one of the funniest Best Picture contenders. Emma Thompson and Tom Hanks are a magical pair as they go head-to-head over the rights of P. L. Travers' (Thompson) novel, and who knew there was so much touching personal background stories in each character to make one hell of a tear-jerker? A film that perfectly balances comedy and drama, this is exactly the kind of film that moves the voters.



American Hustle

Director David O. Russell has yet to win an Oscar so perhaps here is hoping that this year, his luck will change. Coming off the successes of *The Fighter* and *Silver Linings Playbook*, he has assembled a mighty cast (Christian Bale, Bradley Cooper, Amy Adams, Jeremy Renner, Jennifer Lawrence) and the setting of the cool, suave 1970s for his newest slick heist film. Very few have actually seen the film, and the release date is still quite a while away, but given the amount of promotion and backing the studio is giving, this is one to watch.



The Butler

Although released in the States all the way back in August, *The Butler* certainly won't be escaping the minds of the Academy voters anytime soon. Director Lee Daniels' name is one that carries some weight in the industry, and thanks to the outstanding performances of Forest Whitaker and Oprah Winfrey (the mega-famous, mega-rich chatshow host who makes a welcome comeback to the screens), this is a textbook example of how to do an Oscar-bait, which must be why The Weinstein Company picked it up for distribution.



Captain Phillips

Despite the controversy that surrounds how Captain Richard Phillips is depicted as a heroic leader when in fact some of his crew argue that he really wasn't, Paul Greengrass' tense, claustrophobic thriller is a palm-sweatingly effective, heart-thumping story, Tom Hanks is hugely reliable, although the revelation here is Barkhad Abdi, the leader of the Somali pirates, a first-time actor of such fearful, threatening demeanour. It's smart, well-paced and the closing scenes are incredibly stirring. If there's an action film to be nominated this year, it's this.



Inside Llewyn Davis

A tragi-comedy in which we follow the titular Llewyn Davis' (Oscar Isaac) struggle in the little known music industry of the folk music genre, the Coen brothers' new film has an overall bleak tone that nevertheless finds time for humour arising from entirely convincing scenarios. The Coen brothers have justly been awarded with many honours in the past, and their most recent work deserves an equal amount of attention. With heartfelt performances as well as a killer soundtrack all performed by the talented cast, the Coens have once again struck gold.



Philomena

Too British to be considered? The lowering of the film's certificate from its original R-rating to a more audience-friendly PG-13 will work to widen the love and critical acclaim, where hopefully Dame Judi Dench's heart-wrenching performance will help elevate this deceptively simple, straightforward "based on a true story" drama. The search for her long-lost son is both a comical but ultimately powerful one for Philomena Lee (Dench), with an unlikely but effective pairing between her and Martin Sixsmith (Steve Coogan).



The Wolf of Wall Street

There's a reason why Martin Scorsese is one of the most respected directors around, and with DiCaprio on top form, tackling a very timely subject matter (greed, corruption of the 1%) is an extra bonus ingredient required to almost certainly make the cut.



Fruitvale Station

2013's down-to-earth and genuine breakout independent film is based on the blood-boiling true story of how a young black citizen was accidentally murdered by the police. It's neither preachy with needless emotions nor dry with tons of information.



The Secret Life of Walter Mitty

Ben Stiller's fifth feature as director is creating buzz for its wonderfully creative mix of fantasy, comedy and poignancy. A Christmas Day release date? Sounds like the perfect film for the whole family. Something for the Academy to consider? Maybe.



Nebraska

Alexander Payne's heartfelt father-son roadtrip movie is a charming, smoothly-directed, carefully paced, nostalgic black-and-white delight. Bruce Dern is quietly moving with very few words, which pretty much sums up the film's general atmosphere.



Before Midnight

Jesse and Celine talk/fight/argue their way through yet another *Before* film that shows what wonders a fantastic script and two actors with faultless chemistry can do just by exchanging words to one another. May look simple, but it's so much more than that.



Rush

Ron Howard's Formula 1 biopic is as exciting as it is informative, and even those not familiar with Niki Lauda and James Hunt will find themselves completely hooked by their rivalry and blown away by the adrenaline-pumping race sequences.



August: Osage County

With a cast this good, it could end up as an overstuffed turkey, but early reviews indicate a warm response, although not overwhelmingly positive which is a disappointment given the number of A-list names involved. Still, it's early to completely rule this out.



Blue is the Warmest Colour

The highly graphic, extended sequences of lesbian sex as well as its three-hour running time will certainly alienate some voters but this Palme d'Or winner certainly deserves a mention for its powerful, unrelenting approach to its story-telling.



Her

A quirky, 21st Century rom-com in which our leading man falls in love with the robot voice of his phone. It's a funny, screwball comedy that takes the story to places you would never initially expect it to, which is why it's proving to be such a hit already.



Dallas Buyers Club

Anchored by Matthew McConaughey's career-best turn, he's an HIV-positive man who takes matters into his own hands to find drugs that actually work. There's compassion and fearless energy in its story, which is exactly what the Oscars look for.



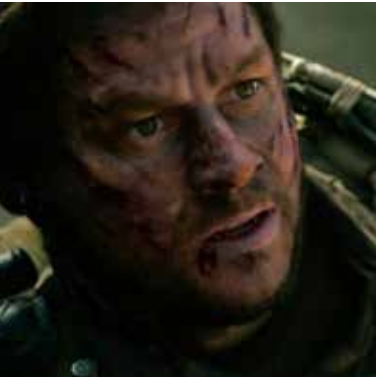
Blue Jasmine

Woody Allen is on tip-top form with his wickedly funny, keenly observed film, with Cate Blanchett most definitely in the running for Best Actress this year portraying what arguably is this year's most fascinating, entertaining female character.



Out of the Furnace

Christian Bale is out for blood, which is always an excellent way to start a movie. It's described as being a gutsy, raw feature with Bale's powerful performance to top it all off - this alone should be enough for the film to pave its way to awards glory.



Lone Survivor

A potential dark horse in this year's race is Peter Berg's (not normally someone associated with high-end awards) intense military action film that has all the predictable but powerful, patriotic elements of heroism, courage and survival.



Mandela: Long Walk to Freedom

It's that time of year for inspirational biopics to start coming out, and with a figure as legendary as Nelson Mandela, the film stands a real chance, what with Idris Elba's outstanding performance that should work well in the film's favour.



All is Lost

J. C. Chandor's sophomore directorial effort is unlikely to get much attention this year since a DVD release date has already been set, as well as its alarmingly early online release date. Very few will see it, but it's one that deserves to be seen and admired.





# SUPERcalifragilisticexpialidocious

Anonymous  
Reluctant Writer

## Saving Mr Banks

**Director:** John Lee Hancock  
**Writers:** Kelly Marcel, Sue Smith  
**Starring:** Tom Hanks, Emma Thompson, Ruth Wilson, Colin Farrell, Paul Giamatti, Bradley Whitford, Jason Schwartzman, Rachel Griffiths  
**Runtime:** 125 minutes  
**Certification:** PG



If the single word that makes up this article's title is the one thing you took away from watching *Mary Poppins* then you may be surprised to know that the jolly word would have most likely induced a deep frown of disapproval from the author of the book itself, P. L. Travers (Emma Thompson). Mrs Travers to be exact. And nothing else. She is very clear as to how she would like to be addressed, much like how Walt Disney himself (Tom Hanks) would have to have others call him



Walt instead of Mr Disney, and so it would seem that they have both met their deserving match in this film. And it turns out that this match is packed with wonderful little details.

There is never a boring moment in this incredibly well acted film despite its 125-minute running time. The story has a defined thread that it follows through without getting sidetracked but does manage to get enough details to weave a sound piece of work. It also makes good use of warm-toned flashbacks to add depth and layers to the emotions that lets the viewers understand the complicated character that is Mrs Travers, without overusing the sentimentality factor. Thompson, with 2 Oscars under her belt, is absolutely spot-on in terms of living and breathing her role in the movie. Her overwhelming reluctance in agreeing to Walt's proposition brought to life by her stiff upper lip

attitude that dominates more than the first half of the film is hilarious to say the least, which is made even more enjoyable by Hanks' and other supporting roles' priceless reactions that utilises every pause, flinch, sigh, look etc. to its fullest effect.

The film does not feature many characters which is because there is no need to do so; each character is meticulously placed to play their respective part that gets the overall clock of this movie tick smoothly. Even Disney's receptionist has her moment of glory and Mrs Travers' chauffeur in Orlando has something valuable to add to the fabric of the plot. Of course, seeing the woman herself who inspired the original character of Mary Poppins, aunt Ellie (Rachel Griffiths), is such a treat that it really is tease that we only get to see her for around 4 minutes total.

Another very welcome treat is the



number of interesting trivia that is revealed to the viewer in relation to Disney as well as the making of *Mary Poppins* itself. Not only do you get to see the original character sketches that were used in the process, those who are already familiar with the Disney picture will instantly recognise its iconic words such as 'spit-spot' and 'spoonful of sugar' in addition to the songs that are sung for Mrs Travers' high threshold approval and no doubt her reaction will only make it better. The concession that Mrs Travers was willing to make in the famous ending song 'Let's Go Fly a Kite', for example.

All in all, this film is certainly one of the best we will see this year with its ever funny, heartwarming and intriguing content. By all means, do make sure to check out the original work of Mary Poppins if you haven't done so already but then that would mean that you've been living in a cave.



# And may the odds be ever in your favour...again

Anonymous  
Reluctant Writer

## The Hunger Games: Catching Fire

**Director:** Francis Lawrence  
**Writers:** Simon Beaufoy, Michael Arndt, Suzanne Collins (novel)  
**Starring:** Jennifer Lawrence, Josh Hutcherson, Liam Hemsworth, Woody Harrelson  
**Runtime:** 146 minutes  
**Certification:** 12A



So it's been about a year since the first *Hunger Games* film made its debut, however, the second one in the series catches up with the protagonists before a whole year has passed for them. Because just being out of the arena does not necessarily mean that you're out of the game. Rather, after becoming the victors Katniss (Jennifer Lawrence) and Peeta (Josh Hutcherson) are unwittingly in the middle of some political agenda which requires them to be madly in love. Which would have been fine but for Peeta's sheepish passivity but more so due to Katniss' long standing love interest Gale (Liam Hemsworth) – despite the severe lack of progress on that front so far – being in the picture. And occupying quite a bit of space in the so-called picture. In spite of the positively life-threatening circumstances that unfold, the tension from the love triangle is lingering in the background which sets down the cringe-foreboding grounds for the third one especially as it will be split into two films.

However, the film is more or less faithful to the contents of the original novel that it is based on and does not



make the mistake of overly dwelling on certain details whilst cutting out significant chunks and ultimately maintains appropriate balance. As fans of the series would already know, quite a bit takes place in the second volume and the film digests it all well without losing the hints and foreshadowing and, most importantly, without dragging on and on. This is also true for the introduction of new characters (Sam Claflin, Jena Malone) that will carry on into the later films

where only the essential parts of their stories are told to let them intertwine skillfully with existing characters. The chemistry between the existing and new casts certainly seems convincing which is very good news for the remaining characters waiting to be introduced.

The film also packs much more of a punch in terms of action in comparison to the first film where the game seemed more of a solo camping challenge than a gladiatorial fight to the

death. Since this *Game* is a special one for which tributes are selected from the existing pool of victors you also get to see many victors with a variety of weapons, skills and both of them in action. Understandably the handheld camera has been replaced to offer a bigger, grander picture particularly so for the scenes of the chariot sequence.

Another aspect to look forward to in this series is the fashion; Effie's (Elizabeth Banks) outfits for the sheer outrageousness accompanied by frankly alarming attention to matching details that would make even Lady Gaga jealous – and we do get a good variety of ensembles with one truly à la Alexander McQueen! – and Katniss' for the imaginative realisation of her symbolic costumes and makeup.

The film ultimately comes to a significant twist of an ending setting the big scene for what is likely to be the most anticipated films over the next two years. Much remains untold and unsolved but with such steady and calm take as demonstrated in this second work I think we can reliably expect high quality feature from the cast and crew should the odds be again in their favour.





Will Sweden’s Bechdel Rating Work?

Fire in the Blood showing

INT. BEDROOM

CINDY and CANDY are on a bed completely naked and are touching each other

CINDY  
I love your tits.

CANDY  
Oohhh!...

A PLUMBER enters the bedroom with a large unconcealed erection.

Pete Brook

thehussingtonpost.blogspot.co.uk

The example above shows a script that is clearly not one which will stop denigration of women in films. It does however pass the Bechdel Test.

Two named female characters: Check. Who talk to each other : Check. About something other than a man: Check.

I know the Bechdel test started as a joke in a comic, but it has build a lot cultural momentum behind it to the point that some cinemas in Sweden have decided to use it as a ratings system.

It is shocking how few films actually pass this test but I really don’t think this is the metric we should use to decide if a movie avoids gender bias. I believe there should be films with just men in, in exactly the same way there should be films with just women in, and like the real world you’d kind of hope there would be films with people of all genders interacting. The problem with the Bechdel Test is that it only applies to one film at a time, not the landscape of cinema.

Run Lola Run? Fail. The Devil Wears Prada? Pass! Maybe there is a problem with the Bechdel Test, but clearly we need some mechanism to fill the vacuum of women on screen. My question is, whose job is it?



**The Directors?**

Females are underrepresented behind the camera. Only 7% of directors are women. Of the entries to Sundance Film Festival, women direct 16% of entries and produce 30%. Obviously these festivals are fostering more female talent, but they seem to be a sticking point for lots of female talent. Women just don’t move on to direct blockbusters. Sundance sponsored Dr. Stacy Smith to do some great research and found that having female directors also increases the number of women on set, but still not to 50:50. However the increase of women on set will hopefully mean more women get a foot in the door.

**The Audience?**

Why do producers do what they do? It’s because they get paid by people going to see their movies. You vote with your wallet and in 2012 the paying public spent \$10,957,460,255 at the cinema. Currently women make up 51% of cinemagoers but are represented by having 1/3 of the presence on screen. Women spend \$5 billion a year going to the cinema, and producers don’t think that sounds like dissatisfaction. This gender imbalance won’t change until male-oriented films start to make less money than a more mixed bag.

If you see a film by a female director whom you admire, buy the DVD, tell your friends to go see the movie, because without legislation that impinges on creative people (no one wants that) it’s the only way the situation will improve.

Finally, the thing that annoys me most is that because of the gender bias in front of and behind the camera we are missing angles, stories and entertainment that would actually make the producers money!

A gender-bias test that applied to a studios’ output for a year which measures the number of movies that it releases that pass the Bechdel test, the ratio of male/female leads across its films and the ratio of male/female directors would be a start.

**The Producers?**

Who decides who directs a movie? The producers. Who produces films? 80% of the time it’s men. Now I think this is the place where, with the right kind of lobbying and nudging, we can slowly change the number of women in films. These are the positions in which women need to be given more opportunity. The producer brings together the script, actors, and director - plenty of opportunity to bring other women on board.

I hear you cry “Exactly, I agree with Pete! It’s all the producers’ fault!”. You recline into your chair and relax feeling kind of smug.

NOPE. It’s our fault.



WWW.MYBIKEMYWORLD.COM



HUFFINGTONPOST.CO.UK

FREE SHOWING!

**Trailer:** <http://bit.ly/VkvEo1>

“A shocking exposé of how pharmaceutical companies use patent law to keep profits unconscionably high even at the expense of peoples’ lives, and a plea for universal access to affordable, life-saving generic medicines. FIRE IN THE BLOOD tells the story of how Western pharmaceutical companies and governments aggressively blocked access to affordable AIDS drugs for the countries of Africa and the global south - causing ten million or more unnecessary deaths. It is the inspiring story of the improbable group of people who decided to fight back. Shot on four continents and including contributions from global figures such as President Bill Clinton, Bishop Desmond Tutu and economist Joseph Stiglitz, FIRE IN THE BLOOD is the never-before-told true story of the remarkable coalition which came together to stop ‘the Corporate Crime of the Century’ and save millions of lives.” (copyright: International Film Circuit)

Title : Fire In The Blood

Cost : FREE

Date, 25th November, Monday

Venue : LT16, SAF Building, SK Campus



THEGUARDIAN.COM



# TELEVISION

Editors: **John Park,**  
**Emily Fulham**  
television.felix@imperial.ac.uk



## Sexy scientists study science of sex

### Masters of Sex is a show science lovers can't miss

**Giulia Gabrielli** Television Writer

Let's face it: after *Sex and the City*, most mainstream TV programs with the word sex in the title have caught our interest – but not *Masters of Sex*, and yet this show had so many things going for it that it was impossible not to look forward to it. With its great cast, Michael Sheen in the leading role, the 1950s costumes, and the scientific content, I would have watched it no matter how random and non-committal title. The show has been on for more than eight weeks and it is safe to say it has not disappointed.

The series shows the story of Virginia Johnson and Dr William Masters, the team that pioneered laboratory based observations of human sexual behaviour and anticipated the rise of the sexual revolution. Their story is not only one of interesting medical achievements. In fact, despite their groundbreaking discoveries (the four stages of sexual response, multiple orgasms, vaginal lubrication), most of the general public would not know about them were it not for their TV show-inspiring personal relationship.

After years of collaborating in some of, literally, the most hands-on projects science has to offer (I'm sorry to say dissecting *Drosophila* flies pales compared to inventing giant glass vibrators), Masters married Johnson and the two became inseparable companions in life and work. Despite their divorce, and recent interviews with the late Mrs Masters revealing that the two never loved each other and that Virginia married Bill out of fear of compromising her job, the show is currently airing the sweet initial stage of the relationship.

Michael Sheen is, unsurprisingly, incredible, managing to portray a character who is both innocent and disturbing, likeable and creepy. Similarly, Lizzie Caplan ('mean girl' Janis Ian) is perfectly able to handle the comparison with her talented colleague. She is such a strong female lead that it is hard not to like her. Even so, Miss Johnson is not just a romantic heroine, but a complex figure: a sexually conscious single mother, ambitious, competitive, free-spirited, and troubled. Caplan is able to show the inside worries of her character, driven and dedicated to her work, yet tormented by having to leave her children.

Although the show has been criticized for approaching sexual liberation too freely and for not presenting the pressures that society must have imposed on such an independent woman, the actors perfectly portray the personal struggles and moral dilemmas. The other characters' stories are equally compelling, with subjects such as homosexuality and traditional marriage creating riveting plotlines. In addition, the set is so beautiful that everyone from *Downton Abbey* geeks to *Mad Men* aficionados will enjoy it.

Finally, it is rare to find a program that so accurately depicts the everyday life of scientists. In this program, the actors do not spend their time flirting with each other whilst occasionally wearing white coats. Research is an important side of the series and, although it is not a recollection about the joys of grant proposals and Eppendorfs, it definitely succeeds in showing the ambition and motivation of scientists and even in making them a tiny bit sexy for once. This show was made for Imperialites, as it's basically intellectual porn: love and research as an excuse to watch TV on a Sunday evening without feeling guilty about the unfinished lab report.



CHANNEL 4

## What's on this week

### Don't miss

#### Sherlock

Before the long-awaited third series begins (the date of the premiere is as of yet unreleased), remind yourself of what happened in the last series of the modern-day retelling of the detective.

**Friday 29th November,**  
**BBC Three, 9pm**

### New this week

#### Don't Ever Wipe Tears Without Gloves

Another Scandinavian import, this three-part miniseries is the story of young love in the Stockholm gay community at the height of the AIDS scare.

**Monday 2nd December,**  
**BBC Four, 10pm**

### On catch-up

#### Doctor Who: The Day of the Doctor

In case you missed it, the much-hyped 50th anniversary episode (along with the 3D version) is available online, along with all the celebratory specials and documentaries.

**Online on 4oD until Sunday**

## Cartoon Corner

### Samurai Jack: A Retrospective

Tom Rivlin

*Samurai Jack* aired on Cartoon Network from 2001-2004. It was created by Genndy Tartakovsky, also the creator of *Dexter's Lab* and a producer on *The Powerpuff Girls*. It tells the story of an unnamed samurai (nicknamed Jack) from "long ago in a distant land" (a deliberately nebulous era/place where Robin Hood, Vikings, Cossacks and samurai coexist), who is tasked with defeating an evil demon named Aku using a magic sword forged by the gods. Standard hero's journey fantasy stuff, but the snag is that Aku transports Jack to the far future, where he has succeeded in taking over the Earth and turning it into a seedy spaceport. Jack's mission is then to defeat Aku and find a way back home. It's still pretty simple, but also unique and creative.



CARTOON NETWORK

One interesting feature of the show is that there are almost no recurring characters – most of the time Jack is alone as he wanders from place to place looking for a way home. Many episodes contain almost no dialogue, yet somehow still remain gripping. The only recurring character besides Jack and Aku is The Scotsman (again, never named), who has a machine gun leg straight out of a Robert Rodriguez movie. Just thought I'd throw that out there.

The plot of each episode is usually very simple: Jack wants to get from A to B but Aku has sent something to stop him, or Jack must save someone from Bad Things that Aku has done. The simplicity of the plots allows the show to focus on the action scenes and the interesting characters that Jack meets. The show is not afraid to mix genres – for example, Aku's minions are all robots (allowing Jack to slice an infinite number without spilling a drop of blood). Jack frequently encounters monsters of all shapes and sizes, and they rarely state whether they're aliens or something magical – it basically doesn't matter. Episodes vary in tone and genre; Jack goes from fighting robots in space to trying to get past blind archers to reach a magical wishing well – nothing is off limits.

Tartakovsky's influences in the show are very obvious, yet they're diverse and colourful. He draws inspiration from Star Wars, old martial arts movies, various anime and comics (one episode is 'inspired' by 300, one is yet another Seven Samurai retelling, but with only one samurai). The art style is 'Japanese' (not necessarily anime) and it looks, well, pretty damn good. The episodes are atmospheric, with intense action scenes, yet are never afraid to be light-hearted and fun on occasion.

You may be thinking 'so Jack wanders from place to place and nothing ever happens'. In a sense, yes, but what's amazing about the show is how it manages to make this really gripping and engaging. Every episode is an individual work of art and a memorable, satisfying experience. Sadly the series was never finished, and Jack never made it home/defeated Aku. Tartakovsky has always dreamed of finishing it, and recently IDW comics started publishing a continuation series. Hopefully someday soon Jack will return to the past and undo the future that is Aku!





# 5 Things Consoles are killing

## Carrying on the tech sections murder series: the next suspect

Osama Awara  
Games Writer

With the recent releases of the Xbox One and PlayStation 4, it's high time we examine the victims consoles have claimed since their heralding in the 70's. Will they be the ultimate culprit in our murder series?

### Many Potential PC Gamers

The great thing about consoles is their price relative to gaming PC rigs. With the Xbox One currently at £430 and the PS4 standing at £80 less, it's no wonder so many gamers flock to consoles instead. With the same amount of 'console money' you'd only manage to buy a 'student' PC and by that I mean a computer that handles Microsoft office and RuneScape if you fancy a bit of that. For you to handle a hardcore game such as Battlefield 4 or Crysis 3 at decent frame-rates and maxed out settings, you're



looking at easily over £1000. With the current state of tuition fees, I don't think any university gamer has that amount of free cash lying around.

### Backwards Compatibility

Before buying a next generation console, whether it is a PlayStation, Xbox or Nintendo, one of the main gamer concerns is whether they can play their old games collected over the past decade on the new systems. It is never more dismaying to find the many game titles on your bookshelf

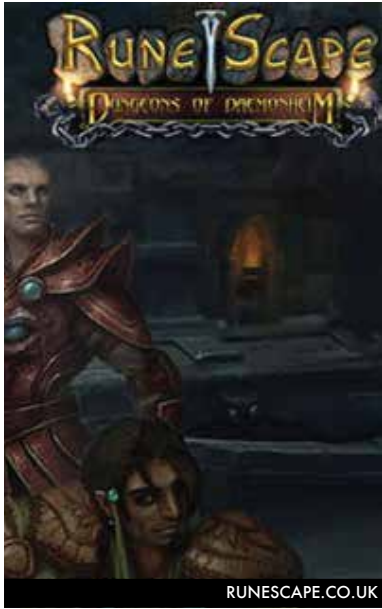
that you still haven't touched or completed unplayable on your new system that you've invested in. By that, ladies and gentlemen, I'm referring to the Xbox One, which does not let you play 360 games, which is such a shame considering many big titles being released recently on the 360 such as Battlefield 4. PlayStation 4 certainly isn't off the hook either, but at least they've tried to remedy their 'hardware mishap' by allowing previous console titles available via online streaming.

in crime, is also responsible for this killing off, with live streaming and pirate downloads of movies.

### Skill

I'll probably get a lot of hate mail from fan boys for saying this... but in my humble opinion it really does not take long to master the console controller especially if it's ergonomically designed specifically for gaming and ease of use. If you compare it to using a keyboard and mouse (yes, I am a PC gamer) you will find it's a lot easier to execute your commands on time that make getting that head-shot a lot simpler. How to test my claim? Try playing FIFA on PC using a keyboard and you'll see what I'm talking about. Also have you ever wondering why no one's ever implemented cross platform online gaming? Because being a console gamer in a Call of Duty Lobby with PC gamers is like finding yourself in a lobby full of noobs – as in, it's not exactly fair.

the 360 vs. the PS3, the main benefit the PS3 had was that you didn't have to pay extra fees to game online, unlike the 360; you'd just have to buy the console, the game and you're set. Now, it costs \$60 a year subscription fee for the Xbox one and \$50 for the PS4. Fairly ridiculous if you think about it, the main reason I buy games is for the online content and playing with some guy across the globe in Hong Kong (who'd probably woop my ass). Console story mode and online gaming are like two sides of a coin, you can't get a coin with a heads side but no tails. Subscription fees for online gaming certainly make it seem that you can actually find coins with only one side in this world...



HEY GUYS! DO YOU REMEMBER ME? IT'S DVD PLAYER...oh...you don't? BLUE-RAY.COM

### DVD players

Since the release of the PlayStation 2 in 2001, consoles have had their own inbuilt DVD, and now, Blue Ray players. The only place you would find a DVD player is e-bay, and even Blue Rays are starting to feel the market shift. Of course, the internet, gaming consoles partner

### Free Online Gaming

I actually considered re-evaluating my decision on the cost effectiveness of consoles compared to gaming PCs. This is because now, you have to pay for online/multiplayer gaming on both the Xbox One and PS4 which 99% of gamers will get either one, the other or both. When it was

# Screenshot of the week, second edition!

Send in your stuff

This is a call out to all you gamers out there. If you have a funny/bizarre/epic screenshot you wish to share just send it to : games.felix@imperial.ac.uk. At the end of the year we will tally up all the scores and the winner will win a free game! Finally your chance to achieve some kind of fame and glory!

Score:  
The Druid 3  
The Paladin 3

Felix Games Team







# Encryption moving forward

## Perfect Forward Secrecy and What It Means for the End User

Yong Wen Chua  
Technology Editor

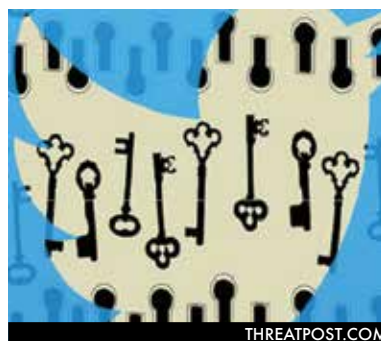
The recent spate of NSA tapping data and storing huge amount of internet traffic has been rather worrying. The exposé courtesy of Edward Snowden has made end-users more aware of the need for encryption, and accelerated the process of enhancing the security between end users and the service providers at many big names. Twitter is the latest company to join the ranks of Google and Facebook by implementing Perfect Forward Secrecy on their servers. This is a much needed move. The end user might not notice anything different in their experience, but NSA will certainly have a harder time trying to pry open your private communications.

Transport Layer Security (TLS) and its predecessor, Secure Sockets

Layer (SSL) are the most widely used protocols in your web browser to encrypt traffic between the user and service providers such as Google and Twitter. When you see a “lock” icon in the address bar of your browser, and a web address beginning with “https”, that’s a sign that TLS is being used to encrypt your traffic. TLS works in two steps.

Firstly, your browser will perform a “handshake” with the server to, amongst other things, decide on the cryptographic algorithm to use for the entire session, and a “shared secret key”, known as a session key, that will be used to encrypt and decrypt the traffic. Then, the server and your browser will transfer data to each other using the session key and an algorithm that was agreed on. The same key is used for encryption and decryption, and therefore the algorithm used is called a symmetric-key algorithm.

However, most websites



implement a form of TLS that does not exhibit the “perfect forward secrecy” property, and this weakness lies in method being used for handshaking, in particular the step when the shared secret key is being transmitted. This is because most servers uses the RSA algorithm to exchange the shared secret, a type of public-key cryptosystem.

A public-key cryptosystem is an asymmetric algorithm, having different keys for encryption and decryption. The public-key is used for encryption, and is public and known to all. The private-key is used for decryption, and is only known to the owner. This means that anyone can encrypt messages using the public-key that only the recipient with the private-key can decrypt.

RSA is such a system, by deriving the public and private keys from a pair of randomly generated prime numbers. The strength in this system lies in the fact that it is infeasible to try and “crack” an encrypted message or “find” the private-key from the public-key in a reasonable time.

Most servers implement TLS by asking browsers to generate some random secret, and then sending that secret encrypted using the server’s public key back to the server. If someone can, by means as simple as obtaining a court order, obtain the server’s private key, then all communication to and from the server can then be retroactively decrypted because the private key is essentially the master key in the grand scheme. This is a violation of the “perfect forward secrecy” property that states that even if one of the secret keys are compromised, the session keys are not all compromised.

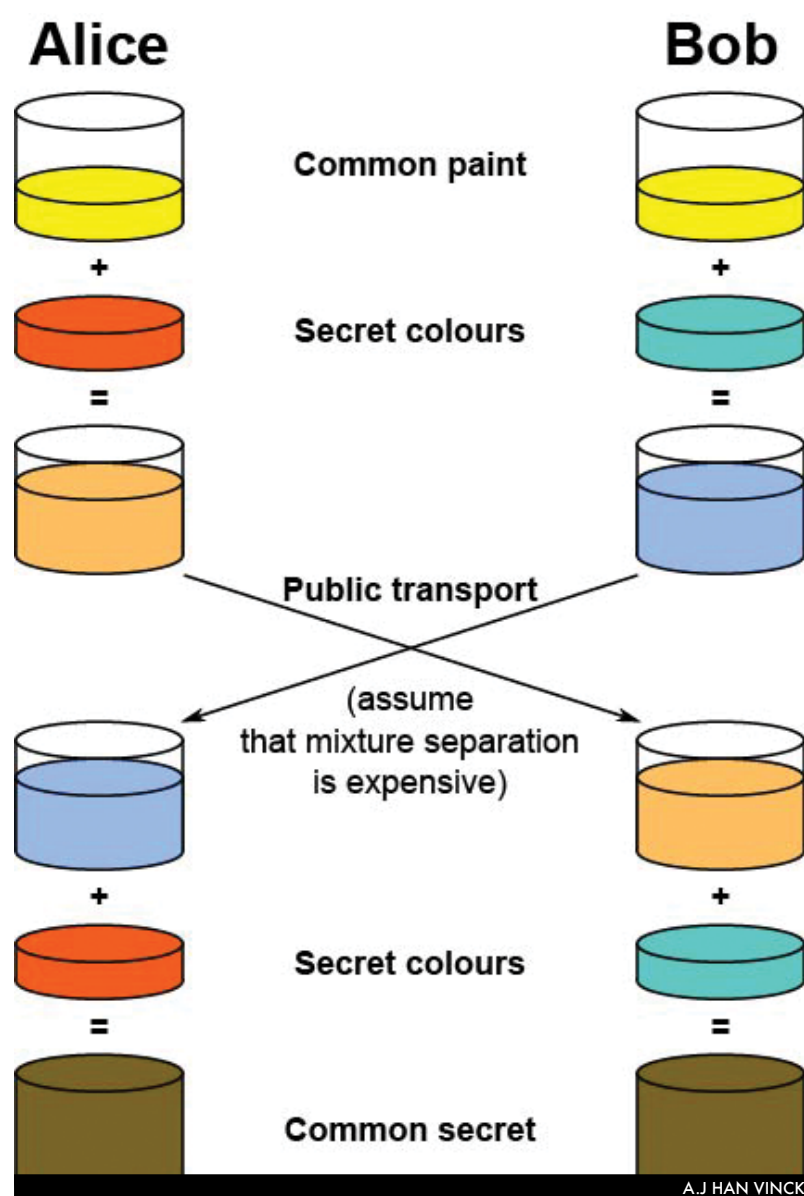
In order to obtain this property, another form of protocol for key exchange has to be used. The “Diffie-Hellman key exchange” is an example. This process can be illustrated by a very simple analogy as seen in the diagram. Essentially, any eavesdropper will not be able to trivially obtain the shared secret

used. In addition, because the keys are going to be different for each session, the compromise of a secret key on the server will not cause the compromise of the session keys, thereby enabling perfect forward secrecy. The downside to this protocol is the increased complexity in implementation, and a possible performance hit on the server due to increased complexity. However, Twitter has written that they have not noticed any adverse effects in terms of performance, and that the increased security is worth the slight increase in complexity.

One problem still remains in all of these security measures: technological advancement. With the NSA storing information storing vast amount of encrypted traffic, there is a chance that these traffic can still be retroactively decrypted in the future. This is because many of the cryptography technique rest

on the belief that cracking them are equivalent to solving two well known problems that are known to be in the complexity class NP: the prime factorisation and discrete logarithm problems. This is equivalent to saying that there are no computers that can solve these problems in a reasonable amount of time. However, it has been proven that a quantum computer would be able to solve these problems in a reasonable amount of time, and if someone can prove that  $P = NP$  (one of the biggest unsolved problems in Computer Science), then this no longer holds.

In the digital age where connectivity is ever more prevalent, it is still important to have some kind of privacy. Aside from the possible threats of governments trying to silence dissent, simple things like keeping your communication away from an annoying ex-girl/boyfriend can be as important.



## The News Bubble

General news from around the tech world, so you can keep up to date with the newest, wierdest and most futuristic things around

### iPad Maxi

Somehow, somewhere a rumour sprang up on the internet that Apple was planning a new larger iPad, with a diagonal screen size of 12.9 inches. To be perfectly honest this seems like a bit of strange rumour. Why release a product into a market that seems to prefer smaller products?

### Sony's SmartWig

The competition in the wearable technology sector is growing extremely quickly. Each company is trying to come up with that one knock-out product that will allow them to dominate. Sony has taken a completely new approach with yes, you read right a Wig. If this product will ever be released is a big question, would be interesting though right?

### Common sense computer

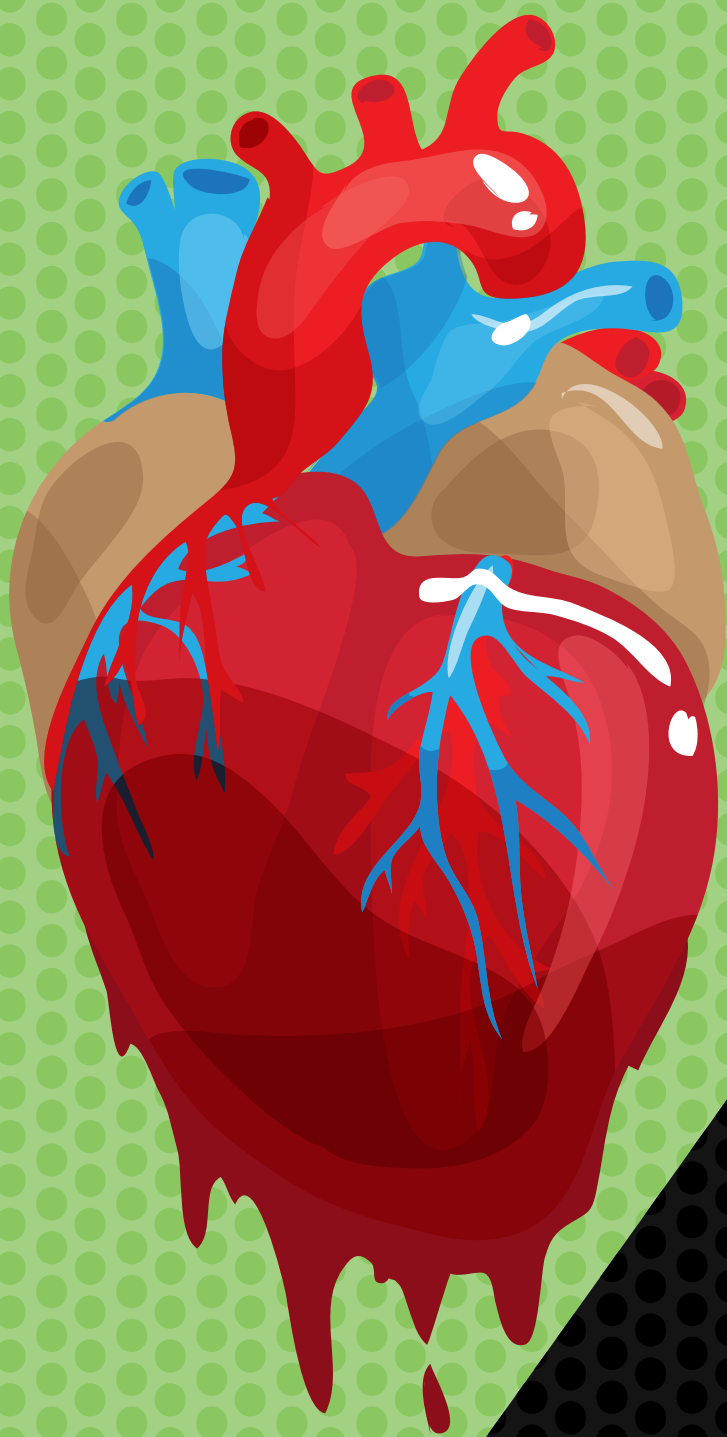
Computers have many things, but common sense is not one of them. Researchers at Carnegie Mellon in the US are running an algorithm which allows a computer to teach itself common sense. Some connections that this program has made is that roads and cars are somehow linked. You go you machine genius!

Maximilian Eggl  
Yong Wen Chua  
Osama Awara  
Technology Editors



# I, SCIENCE

THE SCIENCE MAGAZINE OF IMPERIAL COLLEGE



LIFE AND DEATH ISSUE  
COMING SOON





# A Taste of Christmas (2013)

We get taken into custardy by the myriad of goodies on offer



THEUPCOMING.CO.UK

Taste of Christmas, cheesy no? Stop w(h)ining about the weather and mulling over your troubles!

Now in its ninth year, the Taste Festivals cohort show no signs of slowing down or giving up any time soon. Taste Festivals are annual affairs that take place in at least 12 cities around the world, from Bath to Melbourne to Cape Town. In London, they run two events a year: Taste of London, the flagship event that started it all, happens in the summer, whereas Taste of Christmas more aptly takes place a few weeks before - er, Christmas.

Having been introduced to the Taste of Christmas festival a year ago by a former Felix Games editor - and thoroughly enjoying it - we saw no reason to miss out this year. Especially since the festival moved to the beautiful spacious Tobacco Dock this year, and with a bevy of free masterclasses and demonstrations (amongst other things) on offer - hosted by a star-studded lineup that included Eric Lanlard, Gizzi Erskine and Michel Roux Jr - who were we

to say no? Even if Tobacco Dock was quite a trek away from typical Imperialite haunts (put it this way - we saw what the DLR looked like for the first time!)

Of note was the Intel Baking Theatre - if you were lucky enough to get in line for a free slot, you got to indulge in a baking masterclass where chefs would demonstrate in front, and you'd follow along with an Intel-powered tablet on your station that showed you procedures and tips as the instructor went on. It's meant to be both digitally and personally interactive, and it sure looked so. Naturally all the slots were booked out due to its novelty value; but from what we could see from the sidelines many were enthralled by it. We can't imagine messy cooks will take too well to the idea though; leaving cupcake batter smears all over touchscreen displays probably isn't the best thing!

But the bulk of this festival's attraction really lies with the various

small (and not-so-small) artisan producers who were present and exhibiting their wares, alongside restaurants who had pop-ups on the day to cater to hungry tummies. Having moved to their new venue from dingy ol' ExCeL last year, there's plenty more space to accommodate new producers on show. (In fact when we went, part of the LG floor was unused! More next year maybe?)

Anyway - there were many star products on the day; if we tried to wax lyrical on all of them here we'd probably need a full issue of Felix on our own. We've painstakingly whittled our picks down to the top one or two in each category - we're not saying by any means that you HAVE to give these guys a go; but they're amazing.

*Disclaimer: While Felix Food received complimentary tickets to the event, all purchases and opinions on the exhibits are our own - we're not paid for them. And just as well - support artisans!*

have had us going back for more (since last year's ToC festival!), you really can't complain. All of James' cheeses are stunning - we can't fault any of them, but Blue Monday - a Shropshire blue not unlike a British Gorgonzola - really stood out for us from the time we took home a cheeky wedge last year. It's since been "remixed" so it's a little bit firmer than the Blue Monday of yesteryear; but the flavour and punch is still as we remember it.

Serve on a cheeseboard, or cook with it - we hear one of the Food editors has a boyfriend who makes a mean blue cheese tagliatelle with it...

If blue cheese really isn't your thing, not to worry - the other (milder) offerings in his range are just as scrummy. Cow's milk intolerant foodies can enjoy the Little Wallop and Farleigh Wallop cheeses, and the recently-launched Goddess is a lovely crowd pleaser.

## THE FELIX GUIDE TO VISITING FOOD FESTIVALS

We totally realize that they're not all one size fits all (they're all structured rather differently), and that's fine. We're not saying that this guide is a hard and fast set of rules to follow; however, if you're a food festival rookie/virgin, you might find this helpful so you don't get "deer in headlights" syndrome when you arrive.

After all, it's hard to see sense and know where to start when there's a myriad of mouth-watering fare on offer right in front of you...don't worry, it's a valid excuse.

**GETTING THERE//** In the winter, the bigger indoor food festivals tend to take place in the East London exhibition centres due to space constraints with the West London venues. For the love of crumble, figure out transport beforehand. Especially if your route involves using the Overground/national train services, which can be sporadic.

**SAMPLING ETIQUETTE//** Just because you sample some wares doesn't mean you're obliged to buy what you've just tried, so don't guilt yourself into HAVING to buy everything and be out of pocket. Then again, don't just gobble and ditch your way around the festival - that's greedy and rude. We find making small talk with the people on the stand fun; you get to know the stories behind their companies and products (some of which are rather serendipitous and funny!) Remember, they're people too - you're not buying from a faceless big-name party.

**MASTERCLASSES/WORKSHOPS//** Probably the most fun part! Please, please read and plan ahead if you know one of your culinary idols is hosting a session and you want to be part of it. While most tend to be free, some can cost - so check to make sure you won't be caught out. Other than that, you'll need to sign up for them on the day - so check times and go early to register for a good hands-on view/experience!



THEUPCOMING.CO.UK

## CHEESE

Blue Monday, Alex James Presents. GBP18/kilo  
Available at Whole Foods Kensington, Harrods Food Hall, [pongcheese.co.uk](http://pongcheese.co.uk)

Yes, \*that\* Blur bassist has only gone and bought himself a farm before going into cheesemaking. Sounds like the British version of The American Dream; but when his venture now produces award-winning cheeses that



@ELAINEFORAN



 @feliximperial

 FelixImperial

## FOOD



## TEA

Tea Studio, [teastudio.co.uk](http://teastudio.co.uk)

Prices from GBP1.00/10g sample, or GBP3.50 onwards for 50g bags. Various other sizes available.

A joint venture between a musician/designer and an artist/photographer - in short, two creative folk. David Balfour and Hannah Scott specialize in loose leaf tea from around the world. From the staple English Breakfast to some more-exotic Oolong from China, to sumptuous caffeine-free blends of rooibos and other herbal teas, Tea Studio has such a wide variety to pick from - there's something for every tea connoisseur out there.

What we think makes them stand out is the highly visual aspect of their products - everything from the tea itself (in its loose, "come hither and brew" state) to the packaging (done in collaboration with other artists and designers) is impeccable and pleasing to the eye. Think Whittards with a lot more understated yet artsy flair - the tea looks great both in and out of its packaging! (Okay, we're sure there's an innuendo in here somewhere...)

But it's not all flash, the blends are wonderfully aromatic and uplifting. And of course, they taste heavenly. They've also got substance; a good number of their products have won some gongs in the Guild of Fine Food's Great Taste Awards 2013. We could go on, but as the proof's in the tasting you might as well go and sample them yourself! Samples are cheap on the internet and they last a good few cuppas.

**Felix Loves: Everything (it all looked and smelt good on the stand), but our star pick is the Camomile/Chamomile (caffeine free) at GBP4.00/50g.** It's whole head chamomile blossoms, not the sneeze dust wrapped up in teabags you can procure from aisle-number-whatever in Sainsbo's. Honey buttery notes aplenty (without the bitterness that plagues most chamomile infusions), it's the perfect calming/sleep aid (not like we require sleep aids here at Imperial, do we...)

**Also try:** Reindeer Rooibos (seasonal), Peppermint, Superfruit (not available online - try contacting them!)

## OIL AND VINEGAR

Drury and Alldis of Thornwood

Prices vary, but they start from GBP4.50 for 100ml. Available online: [druryandalldis.co.uk](http://druryandalldis.co.uk)

We're not about to get full-on gourmet on your derriere and say you HAVE to have extra-virgin this, cold-pressed that, and posh everything when it comes to your choice of seasonings/oils/vinegars. Most students will probably be blasé about what oil and vinegar they use in cooking as long as it wasn't harvested from the BP spill. In Carol's home (where we have loads of foodies) the housemates have got a huge bottle of standard Sainsbo's sunflower oil coexisting alongside some smaller bottles of finer oils like sesame, etc. As for vinegar, it's much the same - standard supermarket fare side by side with some posh Balsamic of Modena, Chinese Chinkiang vinegar, etc etc. Naturally, we use some for everyday cooking and the others for special occasions/dishes or certain flavours.

Bottom line is this - good quality

oils and vinegars are a nice off and on addition, much like how you can enjoy some Cadbury bars on the regular and some Lindt/Green and Black's/Valrhona for special occasions. They certainly give an lift to your dish; if you're still "meh" about them, they make awesome "fallback" gifts for foodies if you don't know what to get.

Drury and Alldis sell great oils and vinegars in convenient sizes - if you've always wanted to try a fancy oil/vinegar but aren't sure if you'll finish the lot up, they do economical

100ml bottles which don't look one bit economy. There are a wide variety of other options available as well - we like how gorgeous the 3-bottle stacking set (GBP25, 3x250ml) looks and that it doesn't take up much room either.

*Felix Loves: Sweet English Raspberry Vinegar - nice balance of sweet and sour, and pretty unique. Makes an unusual but perfect addition to mojitos (instant raspberry mojito!) or as a way of jazzing up that extra-special marinade or salad.*



FRAICHE FOOD



## CHOCOLATE

Schokolat

Prices from GBP5.95 per item/"tool". Available at [schokolat.co.uk](http://schokolat.co.uk)

Believe it or not, the two 'tools' you see on the left are actually pure chocolate. Schokolat takes pride in producing novelty "toolbox"/"around the house" necessities in fine Belgian chocolate; but it's not as bog-standard as pouring it into a shaped mould, leaving it to set and then applying details. Rather, the nut and bolt you see on the left actually works - you can thread the nut on! "Functional" whimsical stocking fillers, we say - they definitely taste as great as they look!

Chocolate Special Mention: Cocoa Runners, a monthly fine bar chocolate subscription service (not unlike Graze.) Watch this space for a full review in Felix...we felt lumping it in with the others in this feature didn't do it any justice!

## Aaaaaaand our favourite new pop up - one to watch...

## DISCO BISTRO

Permanent site coming soon in 2014! Follow @DiscoBistroLDN to find out.

There was a good line up of top quality restaurants who had pop-ups at the festival (so attendees could sample some "gateway" dishes) in the hope of luring a bigger customer base. We did enjoy a few of them (Carol's boyfriend went straight for the scrummy pulled pork at Barbecoa); however, funky laid-back underdog Disco Bistro is one to keep tabs on.

Chef Carl Clarke is at the helm of this venture - they've most recently been spotted over the summer at Skate

King's Cross, which in itself was a pop-up roller disco. Prior to that Clarke was part of a series of successful pop-ups; a few which were old Disco Bistro incarnations - along with Rock Lobsta, The English Laundrette and God Save The Clam, some totally different pop-up experiences which were based in or close to East London. Suffice to say Clarke is one of the heavyweights in London's pop-up restaurant scene; so the fact that Disco Bistro will be getting a permanent home soon is rather exciting!

The Roller Disco Burger - complete with rare breed patty, pineapple, bacon and cheese was (and probably

still is) the star of this pop-up's food line-up; thankfully there's no need to wait until 2014 to sample it. Until Dec 20 you can find Carl prepping said burger at **Rotary Bar & Diner, 70 City Road** near the Old Street roundabout.

Felix Food plumped for the sticky K-Pop Chicken Wings (with a bit of a giggle at the name.) Buttermilk fried and laced with gochujang (spicy Korean red pepper paste to the rest of us), and topped off with sesame - these were crunchy pieces of dynamite. Not so explosive that you can't enjoy them, but just the right mix of sticky, sweet, spicy and crunchy for that perfect flavour hit. We'll be waiting, Carl!



THE LONDON INFLUENCE



# CLUBS & SOCS

Editor: **Nida Mahmud**  
felix@imperial.ac.uk



# ICU CINEMA ALL NIGHTER

The greatest cinematic experience of the term is back: Prepare to forget all about horrific library all-nighters and MatLab probs. We've got a pretty diverse lineup ranging from: military sci-fi, black and white Shakespeare adaptations to the film debut of Norfolk's greatest export, there's something for everyone!



CHARTOFF PRODUCTIONS

## Ender's game

6 year old Ender Wiggin joins a military academy to be trained as humanity's last chance to fight against a deadly alien invasion (lol no pressure then). Ender trains everyday, simulating war as little more than a game but he has to come to term with how the annihilation of life comes with a higher cost. Be prepared for zero-gravity setpieces and astonishing special effects worth all \$110 million of the report budget.



REVOLUTION FILMS

## Rush

Chris of the hench Hemsworth trio (fun fact: another brother once starred in Neighbours) stars as Driver James Hunt as he works his way up from the dire straits of Formula 3 all the way to Formula 1. Along the way he encounters Austrian driver Niki Lauda as they clash with their contrasting driving styles of aggression vs precision.



MICHAEL DE LUCA PRODUCTIONS

## Captain Phillips

Any fans of the genuinely amazing Bourne Trilogy should check out this 'based on a true story' thriller by Bourne's director Paul Greengrass. Greengrass brings his signature tense, kinetic style to this incredible story of the hijacking of Captain Phillips' (Tom Hanks) ship by Somali pirates.



STUDIOCANAL

## Alan Partridge: Alpha Papa

Now for some comic relief. Everyone's favourite Daily Mail reading, lady-boy loving DJ is back in his film debut. Alan's radio station is bought by a multinational conglomerate with redundancies on the horizon. When a slightly unstable colleague who's worried about his job brings in a gun and holds the staff hostage, it's up to the famously tactful Alan to save the day!



ALCON ENTERTAINMENT

## Prisoners

A tattooed Jake Gyllenhaal play the detective on the case of two abducted girls who disappear metres from their house. Time is ticking away for their panic-stricken parents especially the father of one of the girls (Hugh Jackman) who resorts to desperate and arguably morally reprehensible means to reach an end. Filled with twists and turns, Prisoners is a thrilling, morally complex insight into the victims of a salacious crime.



BELLWETHER PICTURES

## Much Ado About Nothing

The Avengers write/director did something um in no way similar to The Avengers when he decided to adapt a monochrome version of Shakespeare's classic comedy. Adapted for a modern-day setting, the imminently married Claudio and Hero attempt to trick their warring friends Benedick and Beatrice into falling in love with hilarious consequences.

## All Nighter - Tuesday 10th December

6 films back-to-back, starting at 6pm and finishing at around 7:30am the following morning.

Tickets £10 online or £12 on the door.

Can't make the whole night? Tickets for individual films will be on sale on the door for £3 each. You can also catch the first

two films again at the same times on Thursday 12th December (tickets £3 a film on the door).

As usual, we'll be doing all-you-can-eat hot food and drink throughout the night for just **£5 a head**.

Includes the usual mix of hot dogs, toasties, noodles, soup, tea and coffee and more!

Imperial Cinema is located on the second floor of the Union Building in Beit Quad, above the bar.

Buy tickets now at <http://bit.ly/1ibv0bM>

# IMPERIAL CINEMA



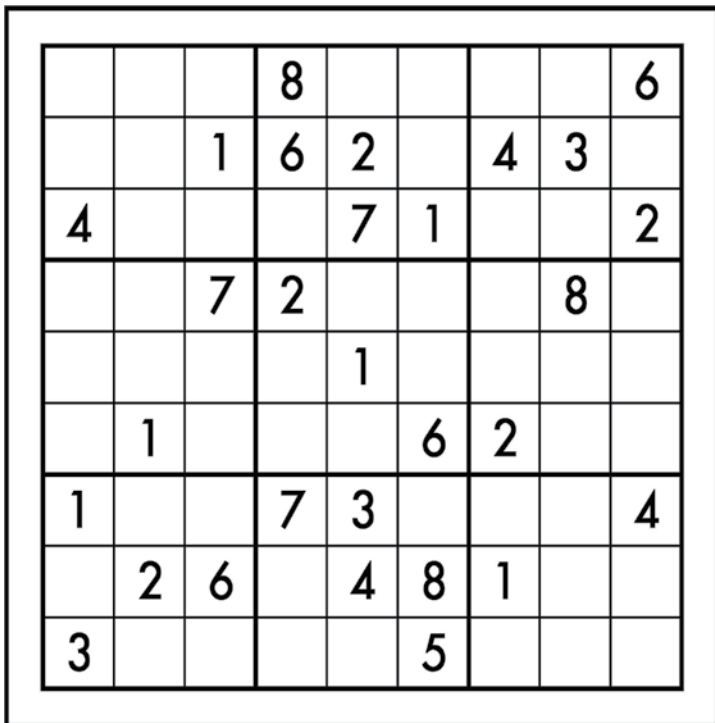


# PUZZLES

# Sudoku

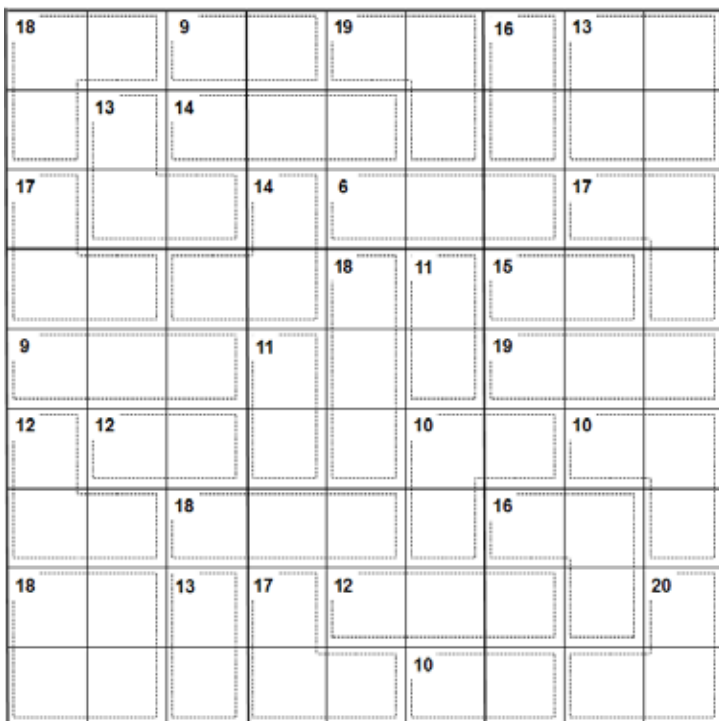
Each row, column, and 3 x 3 box must contain all the numbers from 1 to 9. That's all. Enjoy...

## Harder:



**Killer:**

No clues! Instead, the numbers in each cage must add up to the number in the top left. Numbers cannot be repeated in a cage. Tips: The numbers in each box, row and column must add up to 45. Look for cages with only one possible combination e.g. a two wide cage total 3 must contain 1 and 2.



## Last Week's Solutions

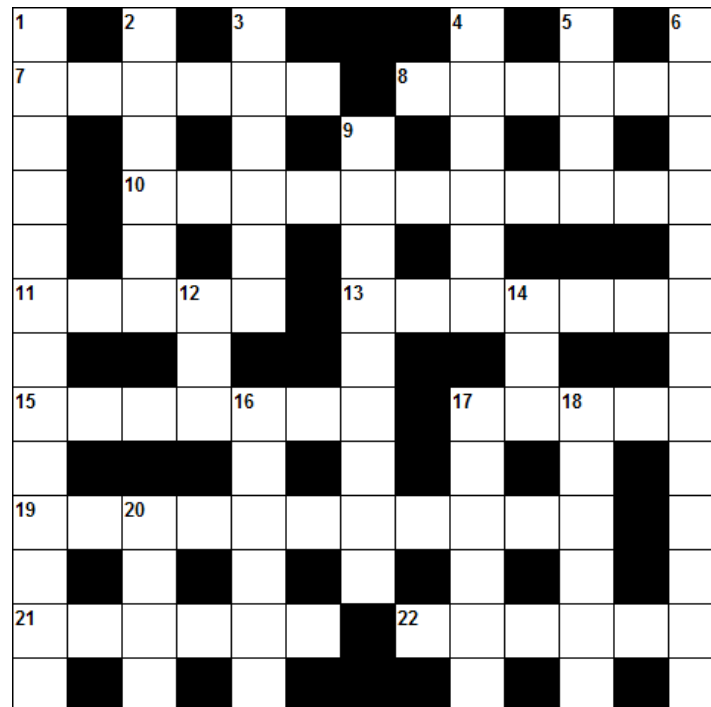


Many apologies for the many errors in the crossword last week. Clearly, coffee, sleep deprivation, and crossword-writing do not mix. We promise to do better this week and in the future!

## FUCWIT League

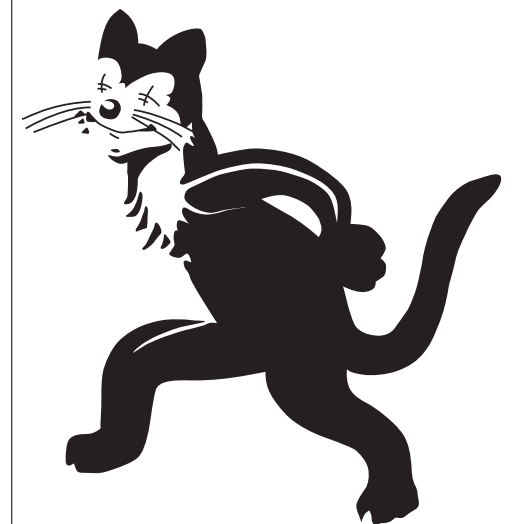
nickwp	28		
Jia Choo	26	Helix	8
Yufan Zhao	17	Gabriel Quek	7
Adam Stewart	15.5	Emma and Ben	6
Juliette Chupin	8.5	WJ	3

# Crossword

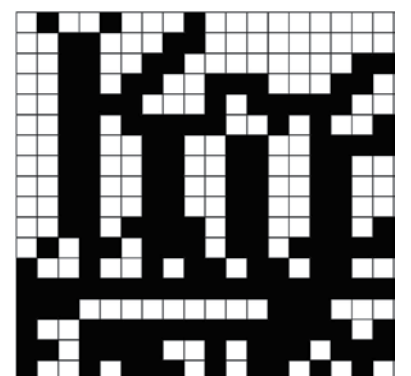


# Nonogram

The lengths of runs of shaded squares in each row and each column are given. Squares can only be shaded or unshaded. Solve the puzzle to unveil a pretty picture.

[illegible]

**Like a bit of a puzzle?  
Want to help befuddle,  
bemuse and boggle  
students and lecturers  
across Imperial?  
Send an email to:  
[puzzles.felix@imperial.  
ac.uk](mailto:puzzles.felix@imperial.ac.uk)**





# HANGMAN

hangman.felix@imperial.ac.uk



## This Week In The Past

The Historian  
Hangman Contributor



**2005** – First partial face transplant – sadly, even a full face transplant won’t disguise the fact that you’re an arsehole.

**2004** – Pope John-Paul II returns the relics of St John Chrysostom to the Eastern Orthodox Church proving once-and-for-all just how nice the Catholic Church is.

**1971** – The Soviet space program Mars lander – Mars 2 – malfunctions and crashes on Mars. A post-crash diagnostic shows the lander to have been 400% times over the legal-limit for interplanetary objects.

**1965** – In response to President Johnson’s calls for “more flags” in Vietnam, the President of the Philippines, Ferdinand Marcos, takes it a bit too literally and sends Johnson 100,000 Philippino flags.

**1839** – The American Statistical Association is founded and the fun hasn’t stopped flowing since.

**800** – Following his stated desire to “sort shit out in Europe”, Charlemagne arrives in Rome ot investigate the crimes of Pope Leo III.



Charlemagne sorts out his son, Louis the Pious. After he sorted out the mess left by the Roman Empire 300 years earlier, Charlemagne also sorted out the Papacy but unfortunately didn’t have enough time to sort out Muslim Iberia.

“Want to decrease your employability?” Email hangman.felix@imperial.ac.uk and give it a go!”

“Curious about words?” Email hangman.felix@imperial.ac.uk and use them”

## WARDITORIAL

The Hangman  
Hangman Editor



**G**ibraltar, UK – Following numerous antagonist moves from Spain, this editor fully advocates forgetting the last 68 years of relative European peace and declaring war on Spain.

Essentially, Spain is clearly asking for it. No one searches a diplomatic

bag without wishing to intentionally prompt an immediate military response. And moving ships into another country’s territorial waters, that’s pretty much calling for a fully-fledged, all-out nuclear response.

Indeed, it is disgraceful that, thus far, our only response has been to summon the Spanish Ambassador to the Foreign Office. This writer believes the time for diplomacy had already long passed and that the matter should have immediately been referred to the Ministry of Defence.

Thankfully, the Spanish tactic to

attempt to hypnotise the entire nation through the world’s most boring and rhythmic football has failed. following Spain’s deserved thrashing at the Confederations Cup in Brazil.

The football alone would’ve been a sufficient *Casus Belli*, however these petulant acts of aggressive are the last straw.

Therefore, this editor suggests our Parliament declares immediate and unrestricted war. So, sign up for the reserves; black out your windows; ratio your food; punch a local Spainard because war it is.

## Science Challenge Under Surveillance

Timothy McSweeney  
Hangman Reporter

**I**t was revealed this week that the Science Challenge 2014 will be placed under direct surveillance by MI5.

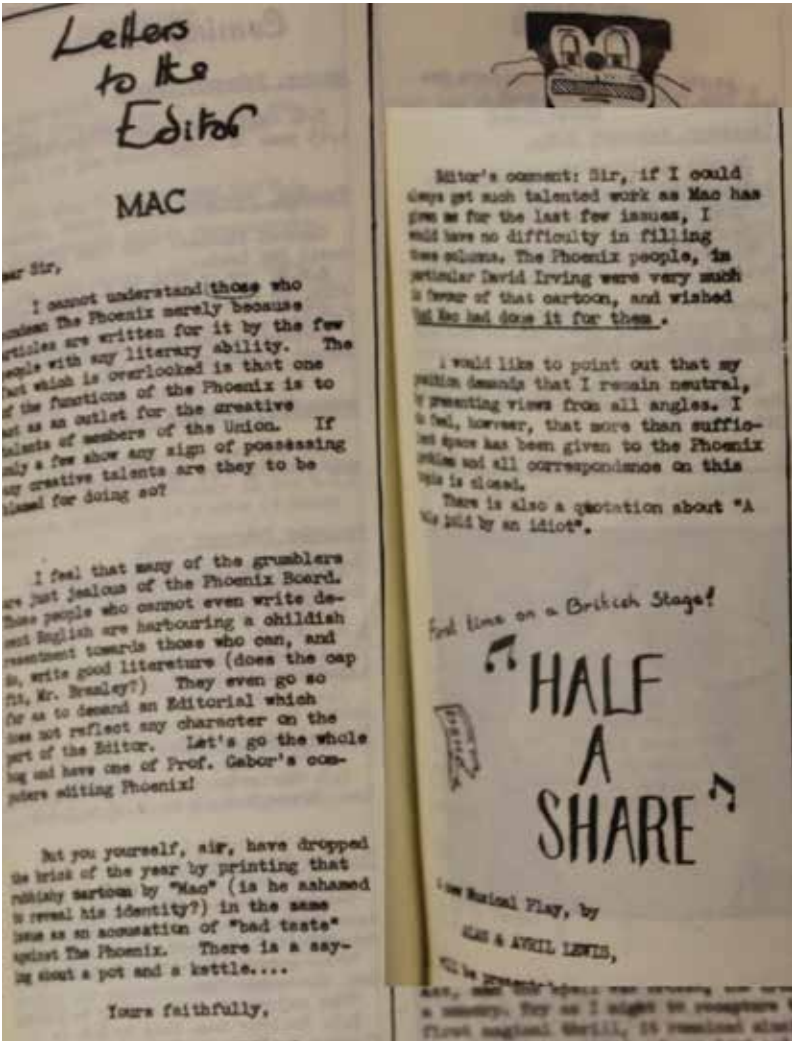
Stating that the free expression allowed by the Science Challenge was an “immediate and real threat to the state” the security services immediately assigned their top agent, codename Baroness Eliza Manningham-Buller

“The RCSU’s Science Challenge posed a sustained threat since its inception in 2006” said an MI5 spokesperson.

“Indeed, with notorious figures such as “Department Destroyer” Dallman, Pallab “Killing Machine” Ghosh and Sir Keith O’Nions AKA Sir Keith Onions AKA The Onion Knight it would be unwise to leave this event unsupervised”.

At press time, Professor Lord “High Executioner” Robert Winston had retreated to an unspecified safehouse until the relevant figures could be bribed.

## Felix In The Past



## Assad Proves That All Medics Are Tossers

The Hangman  
Hangman Editor

**F**ollowing a vote on an unnamed and inferior Imperial news source in which Bashar Al-Assad was tying with Jack Hewitt as “Worst Allumus”, it is obvious that the President of Syria is the living embodiment of the Medic Student’s mentality.

Sources have confirmed the many of the traits expressed by former Imperial Medic, Bashar Al-Assad – arrogance,

obstinacy, isolationism, forming a minority sect with a inflated sense of self-importance – are shared by the average Imperial medical student.

These traits, which can be summarised with the single derogatory word “tosser” are common to both the dictator of Syria and pretty much every one of the roughly 3,000 medical students.

This reporter is surely not alone in recognising the irony that a profession which should attract thoughtful, caring peopl who want to contribute meaningfully to the world actually

seems to attract complete arseholes.

At the time of writing, it is unclear whether there is a potential evil-dictator inside every Imperial medical student.



Imperial Medics or Evil-Dictators? Photo Credit: imperial.ac.uk





the turnip

Hangman's Finest College News Source

"Independent Scotland Would Be Better"

"Or Maybe Worse; Perhaps Just The Same"

After the publication of a 650-page White Paper entitled "Scotland's Future", analysts are unsure of the effect Scottish Independence would have on Scotland.

"Well it may well be really beneficial as Alex Salmond dreams" started one expert, before continuing "on the other hand it could be really bad".

"Or nothing much will change at all. Who the fuck knows?"

The myriad of issues from defence to who gets the UK's oil fields are covered extensively in the report but essentially there is no way to know whether the result will be an improved, deteriorated or basically the same Scotland.

"Until Scotland becomes independent,



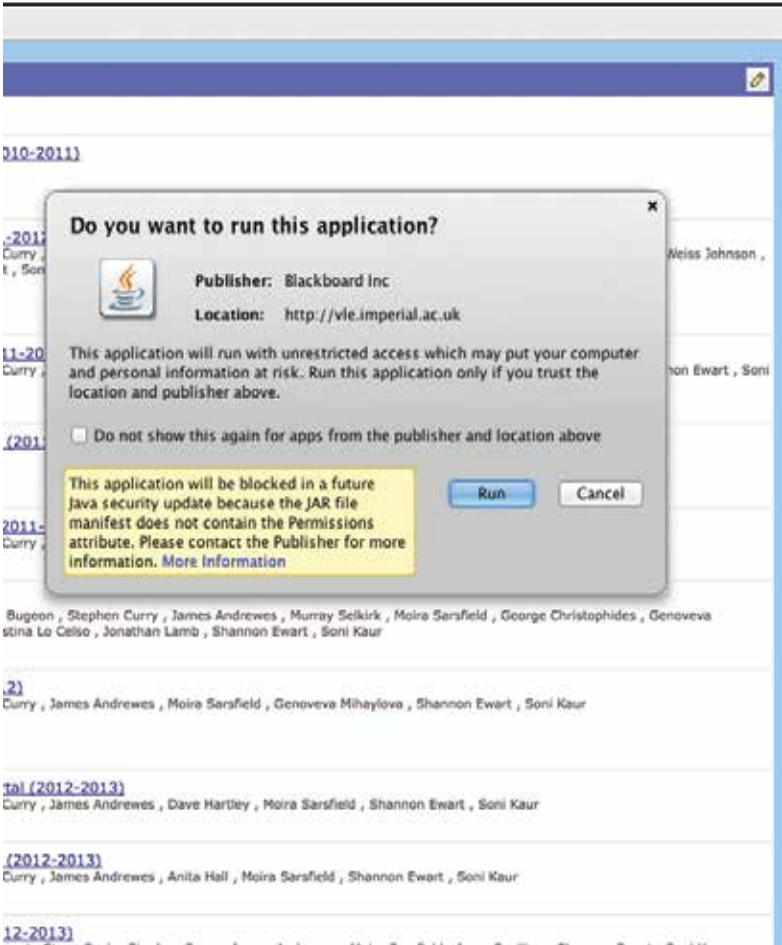
How would this rock get affected by independence? Experts are divided. Picture Credit: Getty Images

we will pretty much just be making random stabs in the dark as to whether the Pound or the Euro would be the preferable currency for Scotland."

"I mean, we have to remember that all this is probably a moot point anyway given that support for independence is currently polling at around 25%"

Most experts, however, were completely unaware that Scotland existed at all and most that did were unwilling to mention that uncivilised place.

DILIGENT COMPUTER JUST MAKING SURE YOU HAVEN'T CHANGED YOUR MIND



England Also Bad At Other Sports Pretty Bad At Cricket As Well



The Australian side celebrate restoring England fans' sense of reality. Picture Credit: Getty Images

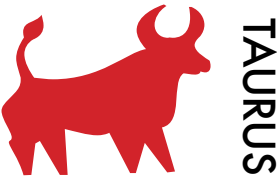
The abysmal defeat of the England cricket team at the hands of their Australian counterparts has this week confirmed that, as well as football, England were also fairly terrible at cricket.

After the roaring success of the Olympics and other British and English sporting successes in recent years, it was, in some way, perversely comforting to know that England are still pretty fucking bad at two international sports.

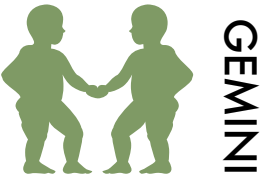
With any luck, an abysmal showing by England at the World Cup next summer, coupled with a resounding defeat in the Ashes will restore fan faith.



This week you forget to send in your carefully planned horoscopes and instead the Editor calls for people to submit their own!



This week you return to the Beit Quad to find the family of Sainsburys trolleys that you dumped the previous week. You turn them on their sides and see how long they stay in the Quad until somebody actually does something about them.



This week you go to the Union's 'SPIN' event in Metric. You misinterpret the highly detailed poster and turn up with a spin bike in your favourite leotard. Everyone stares as you cycle but fuck it, you've already lugged the damn thing far.



This week the oft-neglected videos of the Sabbs turn out to be Weeping Angels. Shit! You close your eyes and count to ten, only to find that they still appear in your mind's eye, reaching out towards you in their branded garb.



This week, you finally find the cleaning equipment in your halls. Except the mice have already got to it and chewed off all the useful parts. You forlornly attempt to sweep your floor with the remaining wooden stump.



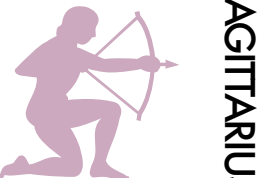
This week you pick up Felix to find that there are two centrefolds in the middle of the paper! Win! As you head into lectures mesmerised by the disrespectful filth, you forget to look before you cross the road and accidentally step on the stinger of a large scorpion. Run!



This week you attend a fancy dress party wearing nothing but the representation of your star sign. As you try to explain your costume's significance to the simpletons in residence you realise the futility of your attempts and resign yourself to a life in law. [Wait, that could be positive- H]. Then you eventually die.



Having protested at the vulgarity in your last horoscope, you open the paper full of fresh hopes and dreams only to find that you have the most horrific horoscope you could ever imagine. Stunned, you stumble towards the nearest person and cry into their arms. Unfortunately they are not so impressed and throw you to the floor. What a dickhead!



This week you walk through Sheffield only to have a sobbing student fling themselves at you, spilling your freshly bought coffee down your shirt. As you scream and flail from the minor burns you receive they flop to the floor, looking at you with disdain. They don't even apologise as you stagger towards first aid. Dickhead!



This week you forget to write horoscopes for Hangman. S/ He gets very annoyed, which is never a good thing. When you wake up you discover an angry geek in your room.



You leave campus at 2AM again, and as you walk down Queensgate you watch a car race up and down the road throwing newspapers at different buildings. As you stare in amazement, the car comes towards you and starts pelting you with newspapers. As you run screaming you trip and are covered by a mountain of paper.



You're crossing the road when suddenly you hear a swoosh. Looking behind you see a dark shape flying the sky. As you run desperately, the giant Burger King swoops down and takes you to his castle!



## SPORT

Editor: Kunal Wagle  
sport.felix@imperial.ac.uk



# Premier League Predictions

James White

Football Columnist

**Tottenham v Man United**  
(Sunday 12pm, Sky Sports 1)

Andre-Villas Boas needs to go back to the drawing board after humiliation at the Etihad last weekend. Spurs have held a very defensive line all season, even though AVB has the attacking resources to play much more offensively. He needs to take some risks but is unlikely to change his tactics when the champions come a-calling. It's great to see Wayne Rooney firing on all cylinders again, and United were unlucky to only draw at Cardiff. This is a great opportunity for David Moyes to silence more doubters and build on the Red Devils' strong record at White Hart Lane.

**Prediction: 0-2**

**Hull v Liverpool**  
(Sunday 2:05pm, Sky Sports 1)

Steve Bruce will have been extremely disappointed that Hull lost their unbeaten home record to rock bottom Crystal Palace last weekend, and with an extra man. For the first time this season, they looked vulnerable and disorganised. Their centre halves could be chasing shadows on Sunday as Daniel Sturridge and Luis Suarez are capable of running rings around them. The Reds came as close as any team has to ending Everton's unbeaten home record for 2013 in last weekend's thrilling Merseyside derby. Hull don't score many so the Reds will rightly be strong favourites.

**Prediction: 0-2**

**Chelsea v Southampton**  
(Sunday 4:10pm, Sky Sports 1)

Both sides will be bang up for this. Chelsea's big win at West Ham was only their second win away from Stamford Bridge all season and José Mourinho says he now wants his side to embark on a winning run in the busy run-up to Christmas. They have a kind set of fixtures to come and, with all their players fit, they could soon seize pole position. But the Saints are no pushovers and Mauricio Pochettino will have been disappointed that they laid down with a whimper after an Artur Boruc howler gifted the Gunners a lead last weekend. Expect



SHAUN BOTTERILL / GETTY IMAGES



PA PHOTOS



HAMISH BLAIR / GETTY IMAGES

an impassioned contest but the Blues' class should prevail.

**Prediction: 3-1**

**Newcastle v West Brom**  
(Saturday 5:30pm, Sky Sports 1)

Both these teams are entertaining to watch because their attackers link up well and understand each other's games. Steve Clarke likes to go for it away too – this could be a Desmond.

**Prediction: 2-2**

**Best of the rest**  
(Saturday 3pm unless stated)

**Aston Villa v Sunderland**

Villa showed a lot of determination to come from 2-0 down to draw at West Brom on Monday. Gus Poyet's Black Cats were luckless at Stoke and do not travel well so anything here will be a bonus.

**Prediction: 2-1**

**Cardiff v Arsenal**

The Bluebirds are fast making a habit of seeing off the league's big guns on their home patch. But Arsenal have been an entirely different kettle of fish this season and should extend their lead at the summit here.

**Prediction: 1-2**

**Norwich v Crystal Palace**

Tony Pulis will recognise Palace's win

at Hull was smash-and-grab and it will take time for him to impose his own style, but he inherits a spirited side capable of pushing a struggling Canaries outfit right to the wire.

**Prediction: 1-1**

**West Ham v Fulham**

Neither of these sides can buy a goal right now and both Sam Allardyce and Martin Jol will both fear for their futures. This could turn out to be a relegation six pointer but who is going to find the net?

**Prediction: 0-0**

**Man City v Swansea**

Swansea badly needed their win at Fulham last weekend to restore confidence in the camp. Unfortunately for them, Man City are indomitable at home. Their strikeforce is just irresistible and they could rack up a few cricket scores at the Etihad this year

**Prediction: 3-0**

**Everton v Stoke**

Mark Hughes was a relieved man after the Potters finally won versus Sunderland but they are not suited to the passing style he is trying to impose. They will be tough to break down but the Toffees have the flair players to win the midfield battle at Goodison Park.

**Prediction: 2-0**

## IC Judo produce stunning performance in London Open

Andres Olivares gives his account



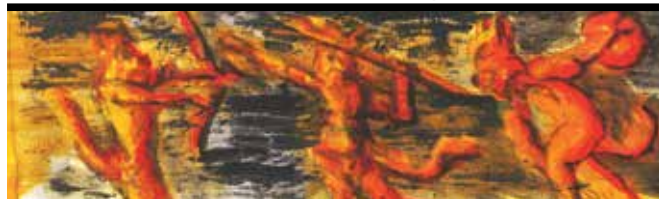
IC JUDO

Judo players from around the UK descended on the University of East London to compete in a tournament of titanic proportions. The main Imperial College contingent left from South Kensington at 6.30am so as to make it in time for weigh-ins, a tedious but necessary part of any Judo tournament. First up to compete were the women, and they did not disappoint. Suzie Lednarova won gold in the under 70kg black belt division, buzz-sawing through all competition with none of her matches going the full 5 minutes on her way. Renata Picciotto pulled off a stunner, winning the novice to green belt under 52kg division which included women with much more than her month or so of Judo experience, as well as competing in the weight class above. Ex-captain and former Imperial student Alice Mitchell managed to get a bronze in the womens under 57kg. We were then treated to a groundwork clinic by our young Brazilian jiu-jitsu phenomenon Nour Kelfi, who won the bronze in his division. The next category to compete were the under 60 kg men's black belts, famed for their speed, cardio and unrelenting pace. They did not disappoint, with our very own captain, Andres Olivares del Campo who, leading by example, ran through the opposition, as if they were like many uneaten bowls of tapas, scoring several devastating Ippons (Judo's equivalent of the knockout, which is scored by throwing an opponent flat on his back) and my personal favourite for its unexpectedness – a twisting arm lock out of thin air when his opponent was stalling on his back, which had his opponent tapping in seconds. Straight after this were the under 66 kg black belts, a large, talent-filled division that had no fewer than 3 Imperial Judokas. This division was equally exciting to

behold, and Etienne Wilbaux snapped up a well-deserved Bronze medal. The highlight was the tense and well contested final won by João Pela. Neither of the competitors could make any headway and the contest seemed sure to head into extra time when João unleashed his secret weapon, an unorthodox switch to a southpaw stance followed by a spectacular throw, which catapulted his opponent gracefully into the air before landing him rather less gracefully on his back for the Ippon and a well deserved first tournament win. Next on the mat was Juuso Terava aka 'The Iceman' or 'The Finnisher', for both his ice cool demeanour under pressure and his scintillating Judo, which often leaves competitors quivering in fear. He showed clinical Judo to earn himself a bronze in the under 90kg black belt division. The final two medal winners were in the heavy weight division – Chris Holdsworth-Swan, the Judo club's social sec and newly minted brown-belt (with an uncanny resemblance to Hagrid from *Harry Potter*), secured the silver medal in his first soirée into black belt level competition, with Chong Swee Hang securing the bronze.

In the team competition Imperial College came second to Nottingham University, only narrowly missing out on the trophy by two points. There was a great team spirit on show from everyone, with people watching and cheering on our competitors, and the more experienced Judokas were able to provide tips and corner advice, which really made the difference to everyone. Special thanks must go to Glenn Spiers, our coach who gave up his Sunday, despite being ill, to coach and support the team. His mat-side coaching and encouragement was crucial to the success of all of our competing athletes.




 @feliximperial

 FelixImperial

# SPORT

## IC produce strong showing in Ultimate Frisbee

Philip Sandwell

IC Ultimate Frisbee

The season started with a bang for Imperial College Ultimate, sending three teams to Open Indoor Regionals. Held in Dagenham, East London, this competition saw 36 of the best teams in the South East compete for a top-six finish, and with it, a place at the National finals.

University-level Ultimate is played on two surfaces: outdoors, on large grass pitches, and indoors, played on hardwood basketball courts. It is also played across three divisions: open (where anyone is eligible to play), women's (exclusively for females) and mixed (with an even gender split across the team). With Open Indoor Regionals hosting such a depth of teams, qualification for Nationals was never going to be easy.

Starting on Saturday seeded fifth, Imperial College Ultimate needed to come out hard to fight their way up the rankings. The first group-stage match was drawn against Portsmouth II, and it soon became apparent that these were to be the group whipping-boys. A relatively nonchalant performance saw Imperial gain easy turnovers, force simple errors and eventually reach the maximum points cap in less than twenty minutes, winning the game 13-0.

The next game pitted Imperial against King's College; the teams not only share the training ground in Hyde Park, but also a friendly local rivalry. Imperial stepped up their game against this stronger opposition and, even during several long points, played impressive shut-down defence to deny several scoring opportunities. Meanwhile on offense, Imperial played it cool, taking the chances they were given to extend a comfortable lead, eventually winning 9-2 and setting up a pivotal final group game.

The University of Sussex are the dominant force in the South East, winning several National titles across all divisions in recent years. Testament to their strength was their second team, featuring cameos from several of their first-team players, who were also unbeaten thus far in the competition. The group-deciding game saw Imperial trailing 3-1 after giving up some cheap long goals, but overcoming their nerves and finding their feet the London team battled back and overturned the deficit to level the scoreline. With the momentum behind them, Imperial forced errors from the Sussex side who now could not handle Imperial's offense. With time running out and with the disc in their hands, Imperial soaked up the pressure to win the game, and with it the pool.

By beating their second team, Imperial earned a semi-final matchup against Sussex I to start their Sunday.

Facing a team unbeaten in the region for several years was an intimidating prospect, but Imperial began the match on an equal footing, trading scores. Both teams forced throwaways and both teams got blocks, and with the game staying tight play became more and more intense. The toughest match of the tournament for both teams, late in the game Sussex forced an error from the Imperial side and, already in the lead, scored the goal to extend their lead to two points. Out of time and out of luck, Imperial had their first competitive defeat of the season.

Upset at the loss but still proud of the performance, there was still everything to play for: Imperial could still end the weekend ranked second. Pitted against the other beaten semi-finalist, Portsmouth I, Imperial's defensive strength was crucial – locking down the opposition, the London side played the disc through the team to score a number of crisp goals. Portsmouth, who looked strong early in the match, began to capitulate and failed to threaten the endzone, with Imperial seeing out the game in relative ease.

Winning meant Imperial faced up against Surrey, the beaten finalist. Over recent years the two teams have met at crucial points in tournaments and a strong rivalry has emerged, which incentivised an Imperial victory even more. An athletic side, Surrey looked promising in the early stages of the match, but the experienced Imperial team was up to the challenge and denied a number of Surrey's attempted scoring passes. On offense, Imperial kept calm despite significant pressure at the end of a hard weekend, working the disc well and being rewarded with some confident scores. Despite the closeness of play, the scoreline painted a very different picture: a 7-4 victory for Imperial.

Beaten only by the eventual winners, Imperial secured second place – their highest ever finish at a Regional competition – and a spot at the prestigious Division 1 Nationals with fifteen of the top-ranked university teams from around the UK. The second team also finished very strongly, finishing 13th and higher than five university first teams, which bodes very well for many of the team who were playing in their first competitive tournament.

Meanwhile the third team finished 25th, earning silverware for topping their bracket of the tournament and capping a very successful weekend for Imperial College Ultimate.

Ultimate is still welcoming new players – if you are interested in playing, regardless of experience, come along to our training sessions in Hyde Park on Wednesdays (13.00-15.00) and Saturdays (12.00-14.00) or email [ultimate@imperial.ac.uk](mailto:ultimate@imperial.ac.uk) for more information.

## Immortals royally Rumble Regents

Harry Badham reports as IC win London Bowl and preserve unbeaten record

The Imperial Immortals returned to Harlington to take on their old rivals, the KCL Regents, in their third match of the season. However, there was more on the line than league positions, as the teams were playing for the London Bowl. Coming off the back of wins against Greenwich and Westminster, the Immortals were looking to continue their winning ways.

It was a cold Sunday Afternoon when the match kicked off. The Immortals' special teams unit was once again fired up, looking to maintain the good work they put in against the Greenwich Mariners, and sprinted down field to tackle the Regents returner.

The home defence then took the field. So far this season no team had scored against the Immortals and they were looking to hold onto this record. The Regents' offence could not break through the big hitting defence and were forced to punt the ball on their fourth down.

The offence then took the field, big runs from Emanuel Olagbaju and Duncan Mackinnon pushed the Regents' defence back. The Immortals pass game, which had previously struggled this season, began to come together with Toby Sinclair finding Henry Badham with a deep ball. However, the defence was not giving in easily, and stopped the Immortals getting into the end zone.

The game continued in a similar fashion, but big plays came in the second quarter. Alex Hutchinson leapt to intercept a deep pass from the Regents' quarterback, but the offence failed to score from the advantageous field position. The home defence then put in another big effort and the Immortals' offence were ready to take the field again. A hard-hitting run game pushed the Immortals deep into the Regents' half. A quick pass threaded from Toby to Tino Millar, who had beaten his defender for pace, provided the first touchdown. After a failed PAT attempt, the score stood at 6-0.

The score stood going into halftime, but the Immortals were ahead they knew that the small mistakes they were making on both sides of the ball could lead to them losing their current unbeaten record. The half began with the Regents kicking the

ball deep to Tino, who raced behind the wedge and managed to make it to the 40-yard line.

The highlights of the third quarter were Duncan's hard running and spin moves and Tino grabbing a deep pass from Toby. It was not long until the Immortals scored again. The offensive line created a big pocket for Toby who had time to pick a pass to Henry, who ran in for a touchdown. The PAT attempt was converted by Duncan diving across the goal line increasing the score to 14-0.

The third quarter came to a close, and after a long break due to injury, the Immortals defence took the field to stop a Regents drive. The away offence took the field looking determined to score. They continued to punch the ball towards the Immortals' goal line and eventually ran in for a touchdown, becoming the first team to score on the Immortals this season.

With the score at 14-6 and less than a quarter to go, the Immortals knew that they had to keep the ball and run down the clock. After a big drive down the field, with both pass and run plays picking apart the Regents' defence, the away team were forced to take a timeout with ninety seconds remaining.

The Immortals' offensive coaches discussed the situation and decided it was time to use the reverse play. The fake was made to the halfback, and then Tino took the handoff from Toby. The defence took the bait and Tino had an easy run in for his second touchdown of the day. Emmanuel then scored the PAT attempt, diving through a large gap created by the offensive line.

With that the game was over, the final score being 22-6. The Immortals had retained the London Bowl and continued their impressive winning streak, which now stands at three games, placing them top of their conference. Man of the match awards when to Alex Hutchinson, Dexter Valencia, Emanuel Olagbaju and Anuj Baid. The overall MVP award went to Tino Millar for his hard work on both offence and special teams.

The Immortals next face the Royal Holloway Bears at Harlington on December 1st. Kick off is at 12 and all are welcome to come and support.

## Aussies strike significant psychological blow

### The Ashes Column

Kunal Wagle

Sports Editor



In last week's column I said that, despite the 3-0 scoreline, Australia troubled England in the summer, and that England would need to be wary if they wanted to retain the Ashes for the fourth consecutive time (for the first time ever). In the Brisbane test the Australian team produced a performance beyond their wildest dreams (and those of most of their supporters) to take a 1-0 lead in the series and win their first game since January.

There are some worrying points for England, beyond going behind in the series itself. The first is the nature of the loss. The Australians look up to the task and fired up – Michael Clarke's comments that James Anderson should "get ready for a fucking broken arm" prove this. This victory would only have given them more confidence, especially the large margin of victory.

Last week in Felix I wrote that England's batting looked in good shape during the warm up games, with Alistair Cook and Michael Carberry looking particularly strong. However the top order's strong performance may have had its disadvantages as the middle order looked under-cooked, with Kevin Pietersen's second innings dismissal summing up England's performance. The two-day practice game before the Adelaide test is now crucial for them to get some practice in the middle.

One positive for England is that the bowlers produced a reasonable performance in the first innings, dismissing Australia for what looked like a meagre total (293). They may want to reconsider selecting Chris Tremlett ahead of Steven Finn. They might also want to further bolster their attack by adding all rounder Ben Stokes in place of Jonathan Trott, who has returned home with a stress-related illness.

Perhaps the most worrying factor is not only that Michael Clarke returned to form with a hundred, but that David Warner and Brad Haddin also supported ably – something that was absent in the summer.

Adelaide is a must win game for England now, as they can't go to Perth – a bouncy pitch where Australia will probably be favourites – 2-0 down. In terms of ability, England should still win this. But Australia have struck a significant psychological blow – one that may prove decisive.





# Imperial XC rock the Brighton 10k

## IC Eagles feast on Cobras

Stefan Bauer describes the action as IC complete the double over KCL

The Imperial Eagles Handball Club could celebrate a double victory over the newly formed Kings College Cobras Handball club, with both the women's and the men's team coming up trumps last Sunday.

The women's team was playing their first game of the season in Barking on Sunday, but a late cancellation forced them to compensate and improvise a great deal if they wanted to defeat Kings College on the day. "We don't have a great deal of depth this season, but starting a game with one player less is something that we wanted to avoid at all cost," said Natalia Couto Francisco, team captain of the women's squad. "On the other hand, it really focused our minds and helped us to ensure we use every spell of possession to the best of our abilities!" She laughed after the encounter.

In the first 20 minutes, Kings College tried hard to demoralise the Eagles and get plenty of goals between the teams. However, Imperial never looked likely to let that happen and cleverly shifted their defense in order to adapt to their opponents' shooters in the centre positions. A necessary consequence of this was that the attackers on the wing would find themselves with more space, but the Cobras struggled to capitalise on the space and numerical advantage.

In attack, Imperial's women played their waves effectively and without conceding many turnovers, which helped them create opportunities to take promising shots on goal. The Cobra's goalkeeper and her unusual technique proved difficult to overcome, but by the interval the score was 5:12 in favour of Imperial.

In the second half, the Cobras' defense tried to disrupt the Eagles' attack by marking their centre player. After an initial success and reducing the deficit by 2 goals, Imperial's women's team shifted their play onto the wing and continued

their fine scoring run. Throughout the second 30 minutes of the match, the leaders managed to hold on to their advantage and secured their first victory with a goal difference of +8.

Earlier that day, the Imperial Eagles men's team had to face the Cobras in Kings' first ever competitive game. Imperial have learned to not underestimate new teams after their close encounter with Royal Holloway 2 weeks previously and started with a strong team. Due to a low turnout, Kings was allowed to add some girls players on the bench in order to support their starting seven and increase their depth. In the first 15 minutes, the Cobras struggled to trouble the Eagles' defense and only two careless moments by Stefan Bauer spared them the embarrassment of ending a half without having scored. On the other side of the court, the inexperienced Cobras showed a lot of will and spirit and tried stay on top of their opponents, but Imperials unique mixture of fast counter-attacks, skillfully crafted schemes like "Wurst" and "Heidi", and their individual brilliance meant that Kings would find themselves trailing by 25:2 at half time. All hope for the second half was lost when the Kings College goalkeeper was red-carded for flooring Imperials Ruben Freytag in the middle of a counter-attack a few minutes before the interval. After a partially sloppy display by Imperial in the second half, they came away with a 42:10 victory.

Club president Rishi De-Kayne, who was unable to attend either fixture, was rumored to have danced in celebration upon hearing the excellent news. He later said that "I am so happy for both teams, but especially the girls!" To win the first game of the season despite being a player short is a remarkable achievement."

This week's clashes see the girls battle it out against UCL, who are favourites for the league title this year, and the men's team is set to play Brunel University, who put in an impressive performance against Middlesex University on the opening day of the season.

Chris Bannon reports from the seaside



IC CROSS COUNTRY

The Imperial Cross Country team pose triumphantly by the coast in Brighton.

Sunday 17th November saw 41 club members brave a very early start to descend on Brighton for the 10k. With perfectly cool and still weather conditions on the seafront optimism was high amongst the group to come away with some PBs to savour.

Owing to some rather inconvenient rail engineering works, the group had to assemble at Victoria station at the rather anti-social 6.10am, so early that not even the tubes had started to run. This led to the day beginning with a highly creative club peloton across Chelsea Embankment, whilst others opted for the night bus choosing to save their legs for the 10 kilometres to come.

Despite the early hour, only one competitor was missing (presumed asleep) as the train set off into the sunrise.

With an elongated train journey en-route to the race, the team had plenty of time to catch up on some must needed sleep, breakfast and face painting! There was even time for a song for birthday boy Ed Hallet, whose present was a rather skimpy size 6 vest to wear in the race. The scenic route did limit time to arrive at the start though. But, following a brisk march led by the captain yielding the club vuvuzela in the air, and a precarious bag drop at the alumni's car the team made it to the start line with barely any time to spare!

Over 2,000 runners took part in the event, but despite this the club had top 25 finishers in both the men's and women's races. Returning from injury, Chris Bannon acted as pacemaker for the term's star male athlete Liam Smith, with both runners staying side by side until the last km with Bannon going to finish in 33.17 (21st) and Smith in 33.25 (22nd), a huge person-

al best for Liam. Some say that Liam owes Chris many drinks for the rest of the year... James Ellis also joined the paced train for the first 4km and held on to run 34.55, a huge personal best. Just behind, Milan Misak ripped up the form book with one of the team's most animalistic runs of the day with 35.39, more than 4 minutes off his previous best.

He just held off Charlie Houston (35.45) who had the better of club secretary Matt Douthwaite (36.18) and Clement Jambou (36.20).

In the women's race, the club's stellar summer signing Imo Simmonds once again impressed running 38.58 to take 12th in the women's race, which would have made the top 200 in the men's race! This followed a 4th place in the London Colleges League earlier in the week, the best result by an Imperial lady for 4 years! She led back Sophie Kirk (42.40) and Imogen Keane (43.29), showing that Imogen proves to be a fast name in ICXC!

Sarah Twaite and Barbara Hollinger were next making impressive club debuts with 46.33 and 46.35 with Antoinette Hardijzer also taking a PB with 47.42.

After the race, there was the necessary pose for a seafront photo, consumption of club baking and a trip to a local fish and chips restaurant. Some of the group then headed back, but other continued visiting some of Brighton's watering holes, before stocking up on some essentials before the early evening banter train back to Victoria.

Altogether it proved to be a Super Sunday for the club, with a terrific turnout, personal best performances and some serious socialising.

Onwards to Stirling for BUCS championships in February!

## BUCS Home Fixtures

4th December 2013

### BADMINTON

MENS 3RD (MEDICS) VS BRIGHTON

WOMENS 2ND (MEDICS) VS  
WOMENS 1ST

MENS 1ST VS PORTSMOUTH

### BASKETBALL

WOMENS 1ST VS CHICHESTER

### FOOTBALL

MENS 1ST VS CANTERBURY

MENS 2ND (MEDICS) VS  
CANTERBURY

MENS 4TH VS WESTMINSTER

### HOCKEY

MENS 5TH VS SURREY

WOMENS 5TH (MEDICS) VS LSE

WOMENS 2ND (MEDICS) VS  
WOMENS 1ST

MENS 1ST VS KCL

MENS 6TH (MEDICS) VS SUSSEX

MENS 7TH VS ROYAL HOLLOWAY

### LACROSSE

WOMENS 1ST VS BRIGHTON

### NETBALL

WOMENS 5TH (MEDICS) VS KCL

WOMENS 7TH (MEDICS) VS  
ROEHAMPTON

WOMENS 4TH VS KCL

WOMENS 6TH VS ROYAL HOLLOWAY

### RUGBY UNION

MENS 3RD VS UCL

### SQUASH

MENS 2ND VS LSE

### TABLE TENNIS

WOMENS 1ST VS LSE

MENS 1ST VS EAST ANGLIA

### TENNIS

WOMENS 2ND VS BRUNEL

MENS 1ST VS KENT