

# THE PIPELINE

ChemEngSoc Newsletter #2

14/11/2017

## Half-Way Point (Christmas Term)

It finally feels like Winter. Everyone in second year has projects, less people are in lectures. The struggle is all too real.

As you get up for those 9am lectures, it makes you wonder... why did I choose Imperial? Why did I choose this Imperial life?

Imperial Life is something we all experience. You know that feeling when you work from 9am to 9pm, then watch anime for a couple of hours to get the stench of coursework off you and cry yourself to sleep. Or something, you know, not that specific...

The cure for Imperial Life is difficult to find. It could be that you follow our fourth-year's advice, or you could embrace Imperial Life and all that it has to offer. As for me? I write the Pipeline and hope that my life doesn't slowly disintegrate before my very eyes...

But other things can combat Imperial Life as well. Like Pub Crawls. You first year families better make it to the ChemEng Mums and Dads Pub Crawl in December. All you drinkers, who want to be the definition of ethanol poisoning. All you non-drinkers, to remember exactly what happens on the night and remind your friends about it for many years to come. It's on the second-to-last day, so there is no excuse for you NOT to be there.

Enjoy!

Kathryn Jaitly (Pipeline Editor).



The Cocktail Party 2017: This happened.

### In This Issue:

- COCKTAIL PARTY!
- More dates for your already-full social calendar!
- Frank Morton T-Shirt Design Competition deets!
- An interview with the one and only Prof. Kazarian!
- Other stuff! Go on, read it! You know you want to...

# Mums and Dads Pub Quiz

***Fun for all the family... well, all those children that BOTHERED TO TURN UP.***

A hundred ChemEngers trekked across the road to Beit to witness our yearly tradition: the ChemEng Pub Quiz. Up for grabs? The winners received a bottle of Glenfiddich. The losers got a pack of Bud Light.

The highlight of the night for many was the hefty bar tab, which managed to pay for drinks for half the night. The questions were also fantastic, spanning from London to History to ChemEng to Wingdings. But we cannot forget to mention the speech given by Richard Prior, founder of Imperial's Mums and Dad's Scheme and fourth year ChemEng. His words were... inspirational? Certainly eye-opening. (And then there was the joke about polar bears.)

Somehow, an all-fourth-year team managed to win the Mums and Dads Pub Quiz. And even though one team tried to answer all their questions wrongly, a different team managed to come in last place. Hopefully they enjoy the taste of Bud Light.

Thanks once again to the Mums and Dads coordinators Seb and Aniket for hosting a great night for us all. Everyone had a fantastic time and families are looking forward to seeing each other at the next Mums and Dads event: THE PUB CRAWL.



*An artist's impression of the Quiz.*

Think you've taken better photos of ChemEngSoc events?  
Email your photos to  
[kj316@ic.ac.uk](mailto:kj316@ic.ac.uk)

## Cocktail Party

Last week on a cold and wintery November evening, over 140 tropically dressed ChemEngers worked against a diffusion gradient to conglomerate within the Tropically themed paradise that is METRIC. T(r)opically [see latest Felix p1] and as with most ChemEng events, overcrowding was not a concern and the voidage on the dancefloor was sufficiently large to allow for some excellent moves.

Enhanced networking capabilities from VK consumption (tropical flavour only, of course) led to many new friendships being formed, and the binary interactions between year groups increased linearly throughout the night. Fortunately no azeotropes were formed [phew] and at 1am sharp Metric became even more Lit as all the lights turned on and the lucky students not to be kicked out early were sent on their way, ready for those 9am's.



*Stress-free ChemEngers*

Now is cool everyone's turning up in bikinis n stuff

**Summary of events by one ChemEnger**

A big thank-you to Nihad and Jordan for organising the event and Dora for photographing. Check out the photos at <https://www.flickr.com/photos/chemengsoc/sets/72157666032506989>.

# FRANK MORTON T-SHIRT DESIGN COMPETITION

Dear ChemEngers,

The T-shirt competition is now open in preparation for Frank Morton! Send your spicy designs to Menghan Liu, your Sports Officer, at [ml5216@ic.ac.uk](mailto:ml5216@ic.ac.uk) by 20<sup>th</sup> November.

What's the incentive? Winners get to go to Frank Morton for free!

Here is a previous design to inspire you (don't set your bars too low though).

**Remember:**

**What we are looking for:**

- Make ChemEng look banterful
- Creative punchline
- Be **\*FABULOUS\***

**Please, no:**

- UCL jokes
- Jokes about other Unis in general
- Stripper jokes. Seriously, it's ok to be sexy and racy but seriously no stripper jokes. We are sponsored by big bois so keep it clean



FM T-shirt Design Winner 2016.

Late submissions will not be accepted so don't waste your time - get them designs rolling!

## Uncle B (or: I've got 99 problems, and ChemEng is, like, all of them.)

Now for something a little different... An agony uncle page, for answers to all those questions you wanted to ask!

Got any problems that need answering? Email them to [kj316@ic.ac.uk](mailto:kj316@ic.ac.uk). You can be anonymous, if you want.

**Dear Uncle B,**

*I went to the Union Bar one day and I saw the strangest thing. I saw one of my professors there, watching the football. I wanted to go up to him, but wasn't sure if he'd recognise me. But then, if he recognised me first, he would be surprised that I'd not spoken to him. What should I have done?*

Surprisingly, professors are human beings also! Don't be shocked to see lecturers having a social life, even if you don't have time to have one.

As for if he would have recognised you, that depends how many office hours you go to, I myself am on first name basis with a few of the lecturers (and certain lecturers only have one name). If you never attend lectures, don't be surprised if he has no idea who you are, let alone that you even exist.

What should you not have done? Asked for help with academic matters in the middle of Union Bar during a match. As a famous professor said: "There's a time and a place for everything, but not now."

What should you have done? Said a friendly hello. You never know, he may have bought a round of drinks...

**Dear Uncle B,**

*I just started to study MATLAB this week, and I'm having difficulty motivating myself to work. I just don't understand the point of MATLAB. Why do we need to learn it?*

Ah, how wonderful the mind of a child is...

Apart from the obvious reason for passing your MATLAB exam, you will often find mathematical equations that simply cannot be solved without numerical methods. The ability to program a computer to solve equations for you is much better than just giving up because there is no analytical solution to the problem.

As with other things you learn in first year, it's not until later you actually find uses for the knowledge you learn. Plotting surfaces, coupled ODEs, implicit equation solving etc. And if you love MATLAB, you'll love PDC in second year (Controlling plants using computer programming). Otherwise, well, PDC's another reason to learn it!

As a famous Krishnan J. Krishnan often says, "Don't waste time resisting!"

*ChemEngLove, Uncle B x*

*ChemEngLove, Uncle B x*

# Shining A Light on Research

## *An interview with Professor Sergei Kazarian*

Professor Sergei Kazarian is a very busy man. As I enter his office, I see him working with two fourth-year students on their research project. He apologises to me, then goes back to the students to discuss their research and their write-up. "And that's how *they* do it", indicating an article on Web of Science.

Writing down their last notes, they move onto their next experiment of the evening. He invites me to take a seat, then we get down to the interview. At first, he says he is nervous. "I told [the fourth years] ... I have done interviews before, but I am the most nervous for this one!" You wouldn't know that as his words begin to fill up the room.

One of the applications of infrared spectroscopy that has attracted much attention is his research in the field of forensics, to date fingerprint traces and give information about the criminal. "Whenever you touch a surface, it leaves a mark," he says, pressing his finger onto the round wooden table. "That mark can be tested, its chemical composition measured. You can test degradation, whether it was left by a man or woman, whereas with a database, you can only make a comparison between profiles." The problem with other techniques is they chemically damage the fingerprint. Here, that's not the case. "No mass spectroscopy is involved – nothing that will damage the sample." This may be why Kazarian's research hit headlines worldwide, appearing on MSNBC. "Our method is even included in the Fingermark Visualisation Manual by the Home Office," he says, proudly.

His time in fingerprints has led to some interesting scenarios. "My research group has done four out of five Imperial Festivals now," he says, gesturing the Imperial Festivals certificate next to his whiteboard with a smile, "and we were invited to the Fringe." The topic of last October's Imperial Fringe was on crime. "I spoke to many people that night. Not everyone followed up, but the next day, I receive an email. [The email is from] a doctor, in the Kensington area, and he asked to speak to me over coffee. This doctor, he was writing a crime novel, and he asks me about my research and how it works. Much later, I receive an email with a copy of the book. The doctor tells me that I helped him a lot, helped him write the concluding chapter of his book... And in his acknowledgments, my name is there – at the top!" He smiles at that, eyebrows arching and eyes sparkling at the idea.

Kazarian has always been interested in solving crime. "When I was a young boy, I read Sherlock Holmes... That's who I wanted to be. The skills, the mysteries he solved. Everyone wants that." When he came to London for the first time, he saw all the sites – Trafalgar Square, Big Ben. Then he decided to find Baker Street. "It was before mobile phones with maps, so I got lost." He decided to ask someone on the street where he could find Flat 221B, Baker Street. He doesn't know why, "but the man – and this has always stayed with me – the man asked, 'You know he's not real!' And I said, 'Why, of course!'"

It could be said that Sherlock has influenced the man that Kazarian has become today: curious, logical, someone trying to extract answers about anything. "Spectroscopy applies to any field. Not just chemical engineering... When I first came to Imperial, I was asked, 'Well, you're not a chemical engineer – why this department?' And my response is, well, because of the links. True, if the chemical engineering department was isolated, I would not be interested. But chemical engineering has links to chemistry, to materials, to biochemistry... That is why."



Professor Sergei Kazarian  
(clirspect.org)

His research interests differ immensely – he deals with forensics, with cancer research, with carbon dioxide within polymers, improving tablet dissolution, art conservation... “Yes, really!” he says with a grin. Research has given him opportunities that he would never have had otherwise. His advice to those of you who want to get into research?

“To get into research, you need to have passion, robustness... drive,” he tells me. As I leave him at eight o’clock that night, he turns to his computer and starts typing on the keyboard.

**Want to find out more about Professor Kazarian’s research? Visit: [www.imperial.ac.uk/vsci](http://www.imperial.ac.uk/vsci)**

**Can’t get enough of ChemEng lecturer interviews? Seb has got his own PODCAST. Want to hear the dulcet tones of Nilay Shah as he discusses his tweeting habits. This and more, at: <https://www.mixcloud.com/ICRadioPodcasts/the-pipeline-podcast-episode-1/> (it plays at the bottom of the screen)**

**Want to interview a lecturer? Or want to SUGGEST a lecturer to be interviewed? Email kj316@ic.ac.uk**

## Dates for the Calendar

**Thursday 16<sup>th</sup> November – Alumni Networking Evening** – 170 Queen’s Gate. If you’ve signed up, look in your inbox for that email with all the deets! Otherwise, make sure to sign up next year!

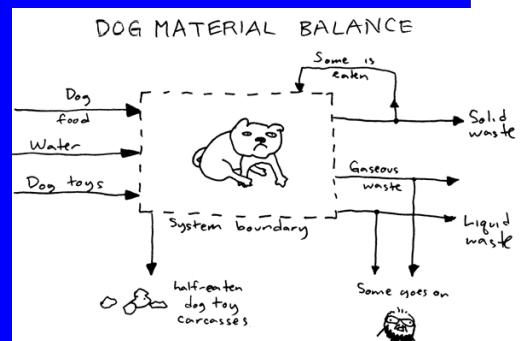
**Tuesday 5<sup>th</sup> December – Christmas Dinner** – Strada Royal Festival Hall. Let’s finish the term and the year on a high! Two weeks before term finishes. Tickets are live as of now!

**Thursday 14<sup>th</sup> December – Families’ Pub Crawl** – classic Fulham route. Make the most of this to get to know your families... and the best pubs nearby!

**What is this blue box?**

**This is space which could be filled up with YOUR articles.**

- **Want to write lecturer interviews?**
- **Want to write to the Agony Uncle?**
- **Got any ideas? Got any fantasies about lecturers? (You know you have them...)**
- **How about random, sort-of-relevant ChemEng illustrations? Like this one:**
- **Or maybe you want to write a thinkpiece about actual Chemical Engineering?**



Credit: Some guy on Quora

**Well, this is the space for you.**

**Email me at: kj316@ic.ac.uk to see what you fancy writing. Because we need articles.**

**No, really.**