

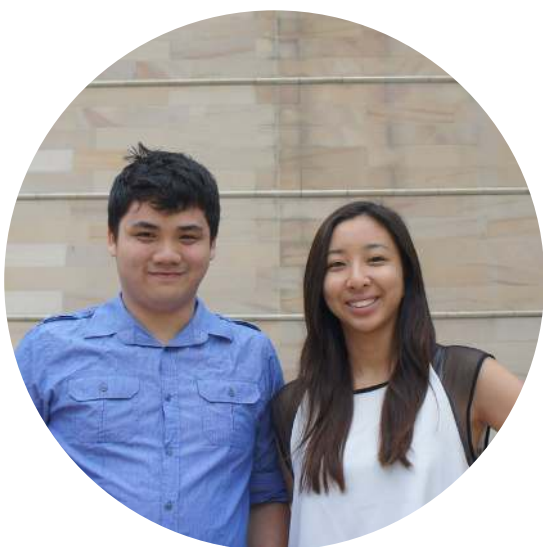
# βeta

— news from computer science and engineering —



Are you ready for **FIRST YEAR CAMP?**

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meet your new **CSESoc Team**

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find out **what's on**

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# βeta

## About CSESoc βeta

CSESoc βeta is published fortnightly  
by UNSW CSESoc, Beta team.

Find us online at

[www.csesoc.unsw.edu.au](http://www.csesoc.unsw.edu.au)

Got some good content? Email us!

[csesoc.beta@cse.unsw.edu.au](mailto:csesoc.beta@cse.unsw.edu.au)

## 2015 issue 102

### βeta Head

Jashank Jeremy

### Contributors

Jake Bloom David Sison Steven Strijakov

John Wiseheart Octavia Soegyono

### Puzzle Wrangler

Emily Saunders Walmsley

## Editorial

Hello, and welcome back to CSESoc βeta for 2015!

My name's Jashank, and I'm the new head of CSESoc's Beta team. I'm looking forward to working with CSE students and staff, as well as the rest of the CSESoc team, to produce a magazine that's as interesting and relevant as we can make it.

You've probably noticed a rather dramatic change in the appearance of our little publication. I should also note that it is entirely done using  $\LaTeX$  (Lua $\LaTeX$ , in fact).

Appearance-wise *and* content-wise, there are changes: our structure is in flux, but rest assured, there will be a big emphasis on technology, as well as computer science, logic, and mathematics; but we also aim to have some variety, including music, movies, and books. And, of course, you'll have comprehensive listings of upcoming events brought to you by CSESoc (as well as some Arc and UNSW events).

So, if this is the first time you've ever picked up a copy of CSESoc βeta, or if you've seen this magazine before, pick up a copy and find out what's new inside!

■ Jashank Jeremy

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## Correction

In issue 101 (the First Year Survival Guide), we specified that the CSE Student Office's opening hours were "*weekdays from 9:30a–12:30p and then 2–4:30p*". This is, in fact, incorrect; the CSE Student Office is open weekdays, 9:30a–4:30p. We apologise for any confusion this may have caused.

## Reminder: First Year Camp

First Year Camp is filling fast. Sign up now to secure your spot! Sign up for First Year Camp on or before Wednesday, 4th March, and get a \$10 Early Bird discount! Pay online at the CSESoc website, or in person at the Socs office.

**When** Friday, 20th March—Sunday, 22nd March (week 3)

**Where** Wombaroo Adventure Centre;  
travelling by coach from UNSW

**Cost** Arc members, \$70; non-Arc members, \$80; deposit \$10 to secure your place; enjoy a \$10 Early Bird discount before 4th dMarch.

**Included** Food! Accommodation! Transport! An *exclusive* CSESoc t-shirt! And a weekend of fun activities!

[www.csesoc.unsw.edu.au/first-year-camp](http://www.csesoc.unsw.edu.au/first-year-camp)

# The CSESoc Team, 2015

*Meet your society team!*

## Co-Presidents



**Davina Adisusila**, 3rd Year Computer Science  
& **Oliver Tan**, 3rd Year Computer Science

Leading your society this year are two powerhouses of, well, power: the inimitable Oliver Tan, who still hasn't been found since the last time he was running shirtless around the Village Green howling in Cantonese (and who still can only be kept calm with the quadratic formula in iambic pentameter), and the indefatigable Davina Adisusila, who, thankfully, *knows* the quadratic formula in iambic pentameter, and in her off-time, plays 1v1 laser-tag (and wins).

Davina and Oliver are already off to a flying start, bringing on board a raft of new sponsors, and preparing the team for a busy year ahead.

## Secretary



**Octavia Soegyono**, 2nd Year Computer Science

With the aid of her mighty enforcer, Octavia keeps everyone honest and organised in the role of secretary. Keeping tabs on everything and everyone, you can count on her to know the minutiae of any and all goings-on of the society.

## Treasurer



**Lucas Pickup**, 3rd Year Computer Science

Pioneering efforts in reducing CSESoc's funding footprint by baring said feet, Lucas is back and brings all his skill and ingenuity to keeping the weekly barbecue funded.

## Arc Delegate



**Karl Mihael Zlatko Hong-Giang Krauth**,  
4th Year Computer Science/Mathematics

Karl's name not only matches the dimensions of his glorious, groomed mane: it also matches the magnitude of his skill at dealing with the bureaucracy of Arc. And, oh yes, if you look at him at just the right angle, in just the right light, you might catch a glimpse of his inner Julian Saksussem.

## Social Heads



**Jake Bloom**, 2nd Year Computer Science  
& **Steven Strijakov**, 2nd Year Computer Science

Two classy individuals are the masterminds of a whole raft of spectacular events, including our weekly barbecue, and in just a few weeks, First Year Camp.

Those two folks are Jake "The Mighty Waratahs" Bloom, who can be found a couple of pages across, regaling his experiences of First Year Camp, and Steven "Pepper" Strijakov, who really, really, *really* loves pepper on his sausages.

## Publicity Head



**Lavender Chan**, 3rd Year Software Engineering

Lavender is *still* active in just about everything, and this year, she's carrying the mantle of Publicity head, so just about everything of CSESoc's that looks good can probably be attributed to her, somehow.

## Beta Head



**Jashank Jeremy**, 2nd Year Computer Science

Jashank has immense difficulty talking about himself in the third person. He also takes a disturbing amount of pleasure at bending  $\text{\LaTeX}$  to his will, and derives a spectacular amount of discomfort from ugly and/or poorly laid-out works, so this year, Beta looks rather distinctive.

## DevSpace Heads



**Matthew McEwen**, 3rd Year Computer Engineering  
& **Joshua Elliott**, 3rd Year Computer Science

DevSpace is truly awesome, so naturally two truly awesome people are responsible for keeping it active, and they are Matt McEwen, who's currently in hiding out in Canada (!) due to crimes against Arduinos (!!), and Joshua Elliott, who *should* be on the run for crimes against violins.

## Dev Head



**George Caley**, 3rd Year Computer Science

George maintains a mop of hair as a protective shield while doing server maintenance, and, and, given that he maintains a server called GLaDOS, it's little wonder that it's necessary.

He's also the goto person when it comes to the CSESoc website or Bark, even though he regularly reminds us that goto is considered harmful, and in partnership with the Talkshops team, he's working on bringing more student software development to CSE.

## TalkShops Heads



**John Wiseheart**, 3rd Year Computer Science  
& **David Sison**, 2nd Year Computer Engineering

John and David are turning their hand to managing the talks and workshops that fill the CSESoc calendar, bringing the brightest minds and sharpest people to CSE—usually *back* to CSE. And with a goals list that contains “*hev fun*” twice, and some fantastic events planned already, it's well worthwhile keeping tabs on the calendar.

John isn't one to shy away from a good workshop, especially if it involves IKEA furniture; David is an unusually highly strung musician, noted for having difficulties with Windows and skill with sharding problems that make him excellently suited to distributing talks.

## CompClub Head



**Jason Lim**, 3rd Year Software/Biomedical Engineering

Jason is a key person in bringing the magic of computer science to high schools, with CompClub. Unfortunately, due to budget cuts, the entire team and all their equipment must fit on his bicycle to get from school to school.

## Student Network Head



**Christopher Manouvrier**,  
5th Year Software Engineering/Physics

Ever the party animal, Chris is our StuNet head this year, although most of the time he's procrastinating from doing anything.





## First Year Camp

*You should go. Seriously.*

On the 21st of March 2014, I walked into K17 wearing a Waratahs singlet and cap. I never missed a game, but on that Friday night, I made an exception for the first time in years. Class went slowly throughout the day, and after I had finished up, I meandered down to the Physics Lawn, where there were a group of First Year CSE students, waiting and mingling.

It was the beginning of First Year Camp, a weekend that turned University from a place where you could see friendly people into a place where you could see your friends. While we waited for the bus to arrive, someone broke out a frisbee, and a game started. A throw came my way, just falling short of me. I decided to do a dramatic dive to pick it up, but it went to ground anyway. Suddenly, a voice behind me calls, "Use two hands Clarke!" (in reference to Australian Cricket Captain, Michael Clarke). Standing above me, laughing, was Pratoolya Kashyap. Suddenly I made a friend.

During the next two hours spent waiting for the bus (we are using better bus companies this year, I promise) Kirsten taught me about Marshall Arts, Bernice taught me some words in Afrikaans, and Josh spoke to me about his research in Artificial Intelligence. I spoke to them about rugby, the beach, and anything else that came into my head. Suddenly, I had more friends.

Eventually we got to the campsite, in time for dinner and trivia night (with an open bar). Sitting to my left was Pierre, and to my right was Jade. Two more friends: last month, Pierre took me on a tour of the Facebook campus in Palo Alto, while I was on my way to meet Jade to go snowboarding in Whistler. Very good friends. Our trivia team name was "The Abusement Park".

Over the next day, there was a mix of activities and group bonding. There were games and scavenger hunts, but nobody really kept score. I can't remember if my teams won anything, because success over the weekend was measured by how many names you learned (and immediately forgot). On Saturday night, there was the long-awaited dance party. Good vibes and good music filled the room (our DJs have wonderful taste), as people in costumes threw back free drinks (did I mention there was an open bar?)

The night only got better as it went on, there were impromptu dance battles, banter and plenty of laughter. People stayed up through the night until the sun rose the next morning, still chatting and laughing well into Sunday. More friends.

After a quiet breakfast and some downtime, award nomination sheets were distributed. The awards included "Most Bogan" (won, proudly, by yours truly), "One shot wonder", "Best Costume", "Biggest Win" and "Biggest Fail". The awards were fair, fun and everyone had a good laugh.

Getting back onto the bus to go home, people were helping with each other's bags, shotgunning seats and falling asleep on each other's shoulders. Once we arrived back at UNSW on Sunday afternoon, people were hugging their new friends and saying "I'll see you tomorrow at the COMP1917 lecture. I can't wait."

I went home to watch a replay of the first Waratahs game I had missed in years.

The camp was well worth it.

■ **Jake Bloom**

*Sign up online at [csesoc.unsw.edu.au](http://csesoc.unsw.edu.au) to secure your place!*



# Upcoming Events

**every Monday** CSESoc's Weekly Barbecue  
*1–2p, Physics Lawn*

social

Come on down to the Physics Lawn for your weekly dose of free barbecue! Don't forget to pick up your copy of CSESoc *beta*, and make some new friends!

**3 March** CompClub Social  
*TBC; 2–3p, K17 Seminar Room*

news

Do you want to teach Computing to the next generation of high school kids? Join the CompClub Intro Meetup, where we'll be discussing plans for the upcoming semester and areas where you can help out. We will also run a brief Intro to Programming preparation session after for those who are interested. Enthusiastic first and second years are encouraged to join!

For more details, head to  
[csesoc.unsw.edu.au/blog/compclub-social](http://csesoc.unsw.edu.au/blog/compclub-social)

**5 March** Cardboard Night  
*6–10p, K17 Seminar Room*

social

For our first social event of 2015, we're going for a fan favourite—the Cardboard night! Join us for card games, board games, drinks and pizza. Make some friends and reconnect with the old ones you haven't seen over the summer!

\$3 pizza and beer for Arc members, \$5 for non-Arc members.

For more details, head to  
[csesoc.unsw.edu.au/blog/cardboard-night-1](http://csesoc.unsw.edu.au/blog/cardboard-night-1)

**9 March** Talk: Internships and Offers  
*2–3p, K17 Seminar Room*

careers

Are you in the process of applying for an intern or graduate position but have no idea what to do, or where to look? Then this is the talk for you!

Karla Burnett, on behalf of Stripe, will host a talk all things internship related:

As a recent CSE graduate, I know that internships and grad jobs can be confusing. A huge amount of knowledge is passed down as folklore, about how to find companies, and make them want to keep you around. This talk will make this knowledge explicit: I'll explain the things I wish I'd known years ago, before I applied for my first internships.

For more details, head to  
[csesoc.unsw.edu.au/blog/internships-and-offers-how-to-get-and-make-the-most-of-them](http://csesoc.unsw.edu.au/blog/internships-and-offers-how-to-get-and-make-the-most-of-them)

**12 March** Installfest  
*3–7p, location TBC*

tech

Having issues getting the right operating system installed on your computer? Need some help with Linux and how to use it?

Installfest is the place for you! The CSESoc team will be available to solve your technical woes, so come along and learn stuff!

\$3 pizza for Arc members, \$5 for non-Arc members.

For more details, head to  
[csesoc.unsw.edu.au/blog/installfest](http://csesoc.unsw.edu.au/blog/installfest)

**14 March** etho @ UNSW: Jane Street Hackathon  
*9a–10p, K17 Seminar Room*

tech

etho: a day-long programming contest. Form teams and hack together software to compete against others and the markets. The winning prize will be AU\$0x3ff per person. There'll be lots of (free) food and drink available.

Absolutely no knowledge of finance, nor OCaml, required. You can use any language, but we'll provide some helper libraries in a few common ones. The contest is entirely technical in nature and you won't need any visual design skills.

For more details, head to  
[csesoc.unsw.edu.au/blog/eth0-unsw-jane-street-hackathon](http://csesoc.unsw.edu.au/blog/eth0-unsw-jane-street-hackathon)

**16 March** Accenture Soft Skills Workshop  
*2–3p, K17 Seminar Room*

careers

**18 March** Jane Street Networking Event  
*5p, The White House*

careers

You are invited to a networking event with Jane Street on Wednesday, March 18 at 5:00pm at the Whitehouse (Fig Tree precinct, Gate 4, High Street, Kensington).

There will be 3 representatives from Jane Street who will meet and greet with CSE students over food and drinks.

For more details, head to  
[csesoc.unsw.edu.au/blog/jane-street-networking-event](http://csesoc.unsw.edu.au/blog/jane-street-networking-event)

**20–22 March** First Year Camp  
*Wombaroo Adventure Centre*

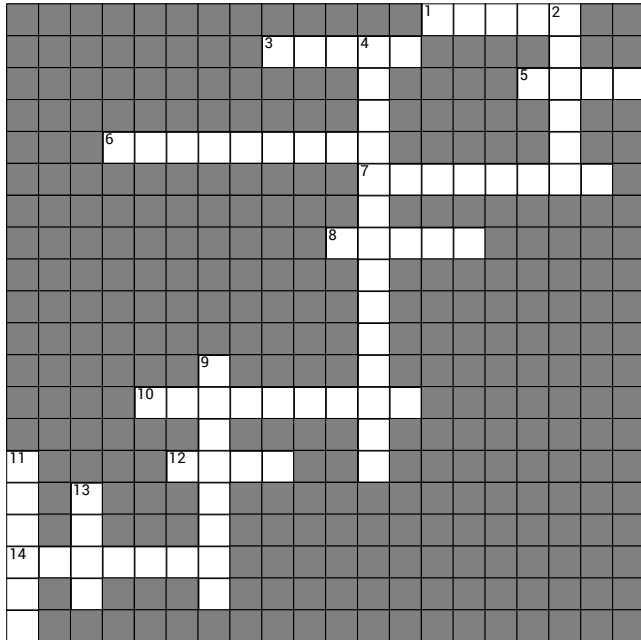
social

Hey, first years! Want to get away from uni for a weekend to a tropical paradise? Make plenty of new friends and share some awesome experiences? Come along to CSESoc's Tropical-themed First Year Camp, from March 20th to 22nd.

Sign up online at  
[csesoc.unsw.edu.au/first-year-camp](http://csesoc.unsw.edu.au/first-year-camp)

# Puzzles

## Crossword



**Across.** 1 Pythagorean divinity 3 Primarily used in finance systems 5 An object oriented shiny rock 6 capitaliseAndRemoveAllSpaces 7 Developed by Grace Hopper 8 While, for, etc 10 Bad code can be compared to this food 12 Pez-like stack 14 No side effects

**Down.** 2 Holds real numbers 4 e.g. Java 9 x 11 Non venomous and kind to newcomers 13 Mozilla Research design

## Brain Teasers

A. In the hexadecimal number system, numbers are represented using 16 different digits: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F. The hexadecimal number AF, when written in the decimal number system, equals  $10 \times 16 + 15 = 175$ . How would you write 1917 as a hexadecimal number?

B. What does the obfuscated program below write to stdout?

```
main() {
    long long P = 1, E = 2, T = 5,
        A = 61, L = 251, N = 3659,
        R = 271173410,
        G = 1479296389,
        x[] = { G * R * E * E * T ,
                P * L * A * N * E * T };
    puts((char*)x);
}
```

## Takuzu

The goal of this problem is to fill the grid with 1 and 0. The rules of the game are:

1. each line has the same number of 1s and 0s;
2. no more than two consecutive cells may contain the same digit; and
3. each row and each column have to be unique.

0		0		1	1		1	1	
						0		1	
		0			1				
0				1				1	1
		0				1			
0	1		1						
			1			0		0	0
							1		
1		1	1		0				0
1		1	1		0		0	0	

*Solutions in issue 103!*

■ Emily Saunders Walmsley

## The News in Brief

**Beam Him Up** “A life is like a garden. Perfect moments can be had, but not preserved, except in memory.”

—Leonard Nimoy, 1931–2015. Live long and prosper.

**Net Neutrality Preserved** The United States FCC ruled last week that the Internet should rely on common carriers, meaning the ongoing war on net neutrality has ended with a resounding victory.

**Terabit Wireless** Researchers at the University of Surrey in England have achieved speeds of 1 Tbps over 100 metres under lab conditions, as part of research into the fifth generation of ITU mobile communications suites.

**Pebble Time** Another gorgeous smartwatch to be released by Pebble, going on Kickstarter for \$159 and looking to ship in May. Huge overhauls, but will it be enough to compete against the new players in the smartwatch arena: Google and Apple?

**HTTP/2 Adoption In Browsers** After HTTP/2 was finalised just a few weeks ago, Mozilla have jumped right on the bandwagon, with version 36 of the Gecko web framework, which powers Firefox, officially supporting the standard. Google are on it too, with the next versions of Chrome to migrate from the SPDY draft to HTTP/2.

**On-The-Fly Flash to HTML5** In other Google news, all Flash advertising content is being converted to HTML5, to make it more accessible for mobile consumers.

**Motorola Refreshes Budget Handset** The second generation Moto E was released last week, a no-nonsense, tidy little smartphone, running a clean Android, at a practical price-point—\$150. It's not a flagship phone by any means, but it's responsive and rugged, and leaves last year's model out to dry.

## This Edition of beta Sponsored By...



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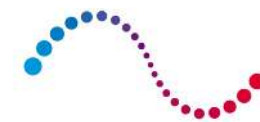
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