

NEWS FROM COMPUTER SCIENCE AND ENGINEERING

Written by the Beta Team of CSESoc
Produced by Wen Di LIM
Edited by Samuel POLLOCK and the
Fresherz.

BETA

Free as in speech and our awesome BBQs.

Beta Issue # 79
Zeta edition
Week 09 Session 1, 2013

CAREERS

Research Groups in CSE

Thinking about the different fields you may be interested in exploring with your computing degree? CSE has eight research groups that may pique your interests.

Research Group	Artificial Intelligence
Lead By	Prof Claude Sammut
Website	http://www.cse.unsw.edu.au/research/groups/ai/

The artificial intelligence group has five key areas that it conducts research in:

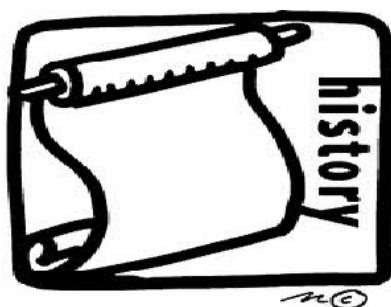
- Knowledge acquisition: the development of knowledge bases formed by human expertise, focuses on incremental knowledge acquisition techniques.
- Knowledge Representation and Reasoning: deals with formal aspects of representing, modelling and reasoning problem domains.
- Machine Learning: the computational approach to learning from data, including neural and evolutionary computation, data mining, learning theory and program synthesis.
- Robotics: where you get to play with neat toys and call it research. Involves problems of sensing and modelling the world, planning and performing tasks and interactions between humans and robots.
- Computer Vision: this research area is about making useful decisions about real physical objects and scenes based on sensed images, using statistical methods to extract data with models derived from geometry, physics and learning theory.

Research Group	Database
Lead By	Prof Xuemin Lin
Website	http://www.cse.unsw.edu.au/research/groups/database/

The database research group focuses on challenges in data management, particularly on graph, multimedia, spatial-temporal, stream, string/textual and uncertain data. Data management areas include:

- data modelling and visualisation
- query processing
- access structures
- multimedia retrieval
- web search
- information retrieval and extraction
- data mining
- probabilistic queries
- similarity search (eg kNN and top-k search)
- mobile content optimisation
- and many many more.

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CAREERS

Research Groups in CSE - contd.

Research Group	Embedded and Operating Systems
Lead By	Prof Sri Parameswaran

Research in this area includes issues like:

- virtualization
- security
- power management
- multicore systems
- design flows
- tools
- run-time environments
- the architecture of models and devices
- reconfigurable computing (eg applications, algorithms, circuits)

Research Group	Networks
Lead By	Prof Sanjay Jha

The networks group looks at supporting the communication needs of major socio-economic domains such as transport, defence and Internet/Telecommunication services by providing innovative communication services. Most of the research work focuses on the higher layers of communication protocols, including:

- IP networking
- resilient networking
- quality of service management in IP management/Cloud
- wireless mesh and sensor networks
- network mobility
- vehicular communication and
- security protocols

Research Group	Programming Languages
Lead By	Prof Jingling Xue

Research in this area includes:

- compiler optimisations
- object-orientated languages
- compilers for embedded systems
- parallelising and optimising compilers
- parallel and distributed computing
- program analysis

Research Group	Service Oriented Computing
Lead By	Prof Boualem Benatallah

Service oriented computing is a way to create a systems architecture that reflects on the trend of components towards autonomy and heterogeneity. For example, breaking down the layers in e-commerce systems eg the presentation and personalisation layer, business logic and the message exchange. Research in this area includes:

- end user programming
- crowd sourcing (processes management, quality control, people management)
- business process management
- web services composition

Research Group	Software Engineering
Last lead By	Ken Robinson

Software engineering research focuses on the use and development of formal methods and specifications. Research in this area includes:

- formal methods
- empirical methods
- specification and refinements
- programming languages and implementation
- functional programming

Research Group	Theory
Lead By	Kai Engelhardt

Research in this area includes:

- rigorous methods for program construction
- epistemic and temporal logics in computer science
- distributed computing
- theory of computer security

Other interesting themes that CSE supports:

- computer vision and image processing
- adaptive e-learning and intelligent tutoring systems

Sourced from:

Research Groups, School of Computer Science and Engineering, UNSW Faculty of Engineering.

Last accessed: 5th May 2013.

Last updated: 28th February 2013.

<http://www.cse.unsw.edu.au/research/groups/>

WRITTEN BY WEN DI LIM

ENTERTAINMENT

CSESoc: A True History

A Poem of Two Gangs

This is not strictly a true history of CSESoc in the sense that it does not encompass the entirety of CSESoc's history. It is merely a dramatic retelling of events that transpired between the Gangstaz and the Fresherz.

I'll tell you a tale, a tale of sorrow,
A tale of betrayal, of promises hollow.
Two peoples they were: foe, yet kin,
Theres but one way to tell it, so let me begin:

They came running, screaming, reaping, beating,
Laughing, whipping, always eating,
Destruction began, and mayhem followed,
The Gangstaz're in town!, the poor people bellowed.

CSEal the Bill Gates!, but they closed them too late,
For the Gangstaz were in, with a bloodlust to sate.
With little resistance, the society was claimed,
And the hearts of the people, were heavily maimed.

Their coming had changed all, it was barbarism,
Even Monday barbecues had been reduced to cannibalism.
(Good thing they sell drinks to wash the flesh down, I might add).
Our beloved CSESoc was slowly becoming mad.

Yet unbeknownst to the Gangstaz, young'uns rose elite,
HS1917 they were called, though they were incomplete.
So at last the fateful day came, when their young lady sounded!:
You called me fresh, so Fresherz was founded!

Full of talent they were, topping the Project AI,
But the Gangstaz cared little, for so great was their pride.
They were busy exploring Scientia and Mech Eng,
Its even said that they built the Stonehenge.

From the Gangstaz rule, CSESoc would undoubtedly be free,

For the Fresherz had the guidance of the son... of Terry Lee.
They vowed to defeat them, the Gangstaz of old,
So they hid their deception, like a fist full of gold.

They were liars, spiers, schemers, plotters,
Indifferent in their mindless slaughters.
Then came days of red sun, and nights, blue (friendly) moon,
Signalling the coming doom.

The war had been waged, bodies tiled the seabed,
From flurries of steel, painting ribbons of red.
The dead were scalped, the living flayed,
But then they went past the limit, causing a massive tirade.

A conference was held to discuss things through,
This unforgivable crime, was under review.
A month-long truce was agreed upon,
To mourn the good mans beard, there would be no battle yon.

And when it was over, they battled no more,
They feasted as comrades, on the freshest boar.
Each year they celebrated that month of peace,
Movember they named it, to reenact the loss of their beard.

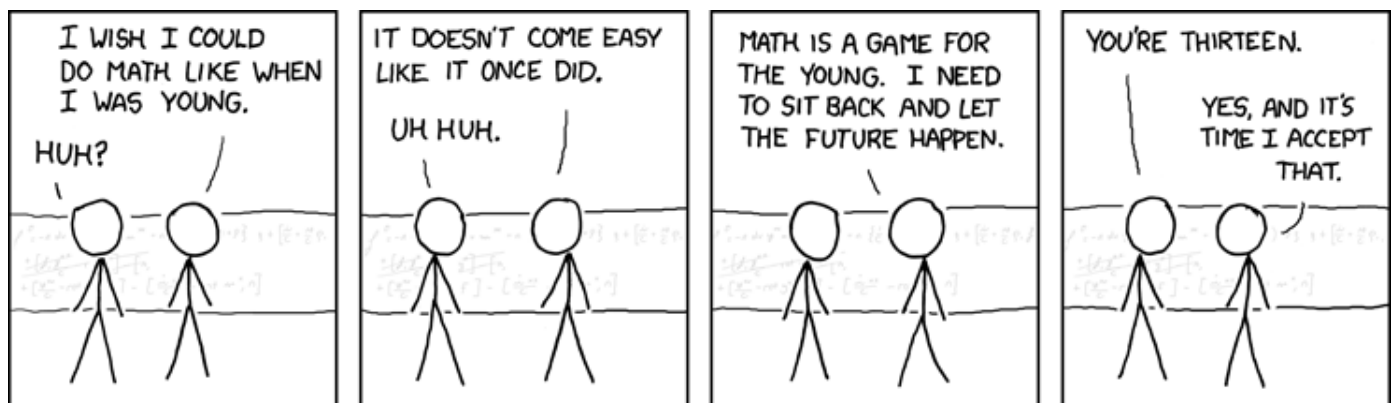
Even today, like apples and chapels, they perfectly coexist,
But alas! now the tale has ended, so let me tell you the twist,
Its a secret so dark, so tasty, so awful!:
The Fresherz and Gangstaz... they're all made of waffle.

WRITTEN BY ANGELO TAMAYO

EDITED BY THE FRESHERZ

ENTERTAINMENT

Comics



Mouse over: They say if a mathematician doesn't do their great work by age eleven, they never will.

Sourced from: XKCD, Too Old For This Shit, <http://xkcd.com/447/>

CSE EVENTS & SOCIETIES

CSE Stureps 2013

The CSE Student Representatives (Stureps) are the link between CSE Students and the School of CSE. They're current students hoping to improve student life and education within CSE.

Our Function

We represent students to the relevant staff (typically lecturers, SS or the Head of School), anonymising any feedback/questions/concerns/suggestions.

We also run a semesterly survey to present to the Head of School so that we can address any course/school concerns before the end of the semester.

We follow up on any issues raised to us, and post updates on our fortnightly meeting with the Head of School to our website and facebook page.

Contacting Us

Stureps are contactable by group email, individual email, an anonymous website form and a facebook page.

Stureps are selected from each year, but students are not limited to their designated sturep - you should use whatever forum you find most comfortable, or whoever you feel most comfortable talking to.

Helpful addresses

stureps@cse.unsw.edu.au
facebook.com/csestureps
www.cse.unsw.edu.au/stureps

How We Are Elected

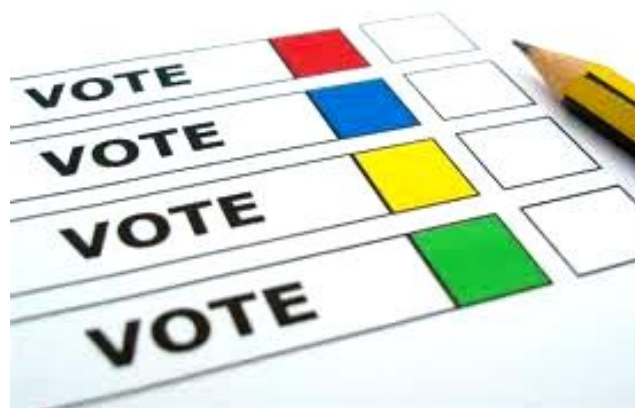
Up to 2 stureps for each year group are elected in a vote at the start of Semester 1 each year. They represent the interests of that year group, regardless of what courses they are taking.

If you'd like to get involved, come talk to a current sturep and consider running next year.

Survey Results

The 2013 Semester 1 survey results are out, and available on our website. Take a moment to check out the course feedback.

If you didn't get a chance to fill in this semester's survey you can contact us at any time. We'll bring out another survey around week 5 next semester, so keep an eye out!



Current Stureps



First Year

Lucas Pickup is usually first noticed for his hair or lack of shoes, both of which he wears (or not!) with pride. Lucas is one of the hardcorest of first years, and makes an appearance at every social event worth being at. Stay fresh!

Lucas is taking COMP2121 in 13s1, and COMP1927 and COMP2041 in 13s2.

First Year

Oliver Tan is the founder of the "Give Brad Hall a Jelly Baby" foundation and flipper of the (motherflippin') onions and hash @ CSESoc BBQ. When he has nothing to do he practices his listening face so that he can use it on you when you come to him with problems. Stay fresh!

Oliver is taking COMP2121 in 13s1, and COMP1927, COMP2041 and COMP3311 in 13s2.



CONTINUED ON THE NEXT PAGE.

CSE EVENTS & SOCIETIES

Current Stureps - contd.



Second Year

Andrew Semler studies part time, but generously donates his Tuesdays to CSE. He figured complaining about courses so much had him destined for sturep-dom.

Andrew is taking COMP2911 in 13s1, and COMP3421 and COMP4920 in 13s2.

Third Year

Beth Crane occasionally makes the gruelling 1500m trek home to sleep, but splits her uni time between Socs Office and Robolab. Shes managed to collect Google sunglasses in all 4 colours.

Beth is taking COMP3901 (on Robocup) in 13s1, and COMP3421, COMP3431 and COMP4920 in 13s2.



Third Year

Brad Lorge is one of the starring members of Team Confufish Royale, the winners of the Microsoft Imagine Cup Australia finals. Brad values student life highly, and is currently the SRC Welfare Officer.

Brad is taking SENG3011 in 13s1.

Fourth Year

Rebecca Wiley is one of the most fashionably dressed CSE students, so its possibly no surprise that shes studying Digital Media alongside Computer Science. Bec spends her weekends out on the water sailing.

Bec is taking COMP3141 and COMP3161 in 13s1, and COMP3311 in 13s2.



Fourth Year

Natalie Wong can be seen riding her motorbike from Maroubra to UNSW, and is always happy to talk about Shoes of Prey (or how awkward it is when they all accidentally wear the same CSE polo shirt).

Nat is taking COMP9321 and COMP9243 in 13s1.

Postgraduate

Sean Harris is a postgrad research student in the area of reinforcement learning. He organises the postgrad social drinks, and his desk is on level 3 (in robolab). As well as being the only postgrad sturep in a number of years, Sean has done almost every possible role within CSE, from Co-Pres to Producer, mentor to sturep.



WRITTEN BY BETH CRANE

OPINION

You know what really gets my bits in a bunch?

Bad user interface design.

We've all seen it. We've all experienced it. But have you ever sat back and really thought about what it's done to you? Have you realised how much goddamn time you've wasted trying to wrestle with the mangled aftermath of an avid Java developer trying to write HTML and CSS? Have you noticed how much stress and frustration you've had to withstand because of a poorly thought out mess of buttons and text? If you haven't, allow me to enlighten you with a little taster.

Combo boxes without Autocomplete

"Please select your country". Thank the lord almighty that we live in Australia. I shed a tear for the poor bastards over in the US every time I have to fill one of these out. I imagine them giving their little index fingers a work-out as they race to the lower end of the list, only to find that they've overshot it because it scrolls 2.35 lines at a time, confusing their eyes by throwing letters everywhere.

Some websites "fix" this issue by having common countries at the top, but this is exactly why we have autocomplete - lots of options to choose from, why not take advantage of that big slab-like thing positioned just to the side of the mouse?

Rollover Menus

Edit -> Preferences -> Font S... - nope, rolled off the menu. Please try again.

Every time you have to navigate a drop down menu with more than one level of nesting it's like entering a little gauntlet. It's a sadistic game. Lead your mouse through the maze of menu items to make your selection, but watch out, an endless abyss awaits you if you venture off the edge!

This is infamous in crappy websites and good websites alike, because it's oh so tempting and easy to implement this poorly. A common "fix" for this problem is to delay every roll-over/roll-out action by 1 second, giving you a chance to redeem yourself. But this wastes roughly 1 second of your precious time whenever you want to expand a menu. Every single time. Unless you click, but nobody does that.

The only place I've seen this done properly is in Amazon's department selector. Nested menus show up instantly on rollover, and as you move your mouse over to the next selection, it notices

the direction your mouse is moving and keeps the menu open for you, even as you travel over no-man's land. I cried when I saw how beautiful a thing this was.

Download Time Estimations

So I'll admit that predicting the future often proves to be a difficult task. But I guess it's useful to know that this download will take about 30 minutes. No wait now an hour. Hang on, about 5 minutes. Wait no, 30 minutes again. I mean 10. I mean I give up, I'm going to have a nap and hope it's done when I awake.

The problem here is that the speed at which progress is made on your download or file copy or computation is jumping all over the place, and practically every time estimator that I've ever seen makes an attempt to account for this that I can only describe as abysmal.

You know what Maths says when you want to make a useful statement about a randomly distributed variable? Maths says take a goddamn confidence interval. You can't be very sure that the download will take any time in particular, but you can make some assumptions and use some simple stats to say that you're about 90% sure your download will take between 15 minutes and 3 hours to finish. So you can have a 20 minute nap, wake up and see that it'll take another 5 - 10 minutes, and then eat some cheese while you patiently wait for the rest of your download. Bliss.

Conclusion

Maybe one day people will care about their user interfaces as much as they care about the efficiency of their backend C code or the beauty of their 4000 Java classes of 5 lines each. Maybe one day all forms will allow you to tab through them in a sensical order, all opening fields will autofocus, and hitting the enter key will always trigger the default action. Maybe one day. But until then we're going to have to suck it up and use interfaces that those selfish little developers made to be easier for themselves to create instead of easier for us to use.

TL;DR: Bad user interfaces are like Cityrail's trains. I only use them because I have to.

WRITTEN BY LUKE TSEKOURAS

ENTERTAINMENT

Some Anti-Jokes and Puns

A black hole walks into a bar. Everyone dies.

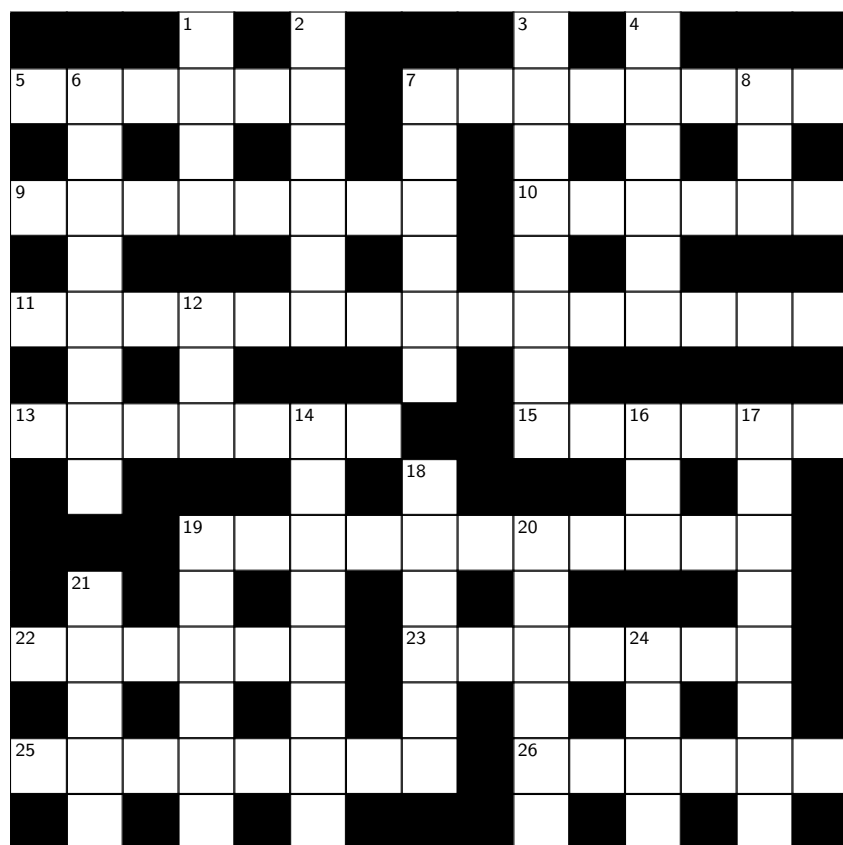
Why couldn't the kitten drink it's milk? Because it's face was stapled to the floor.

How do you stop a baby from crawling in circles? Staple its other hand to the floor.

What do you call a fish with no eyes? FSH

ENTERTAINMENT

Crossword



Across

5. Single celled organism
 7. The community of individuals in higher education
 9. Objects worn on the body
 10. Spanish naval fleet
 11. The process of finding a derivative
 13. Russian mathematician and economist
 15. Founder of genetics
 19. Three-horned dinosaur
 22. French mathematician, many theorems and principles are named after him
 23. See 7. Down
 25. German doughnut, has no hole
 26. An offensive expression

OSWYN BRENT

Down

1. CS Term - Unit ____
 2. Discoverer of logarithms
 3. Universally accepted scientific theories at a given time
 4. Muppet - ____ the Frog
 6. Elementary arithmetic operation
 7. With 23. Across, used to represent complex numbers in a cartesian plane
 8. Statistics - Independent and identically distributed
 12. Old file system architecture
 14. Hobby involving needles
 16. Prefix - New
 17. A group
 18. Computer Graphics - Generate an image from a model
 19. Place of worship
 20. Culture from which our numerals are drawn
 21. Most common result from rolling two dice
 24. Recent programming language from Mozilla

Last week's solution:

	H	E	X		D	I	J	K	S	T	R	A
B		N		U			A			U		
A	L	I	E	N	W	A	R	E		R	A	Y
B		A		I		J				I		
B	A	C	K	T	R	A	C	K	I	N	G	
A						R		E		G		C
G	R	A	P	H	S		R	Y	E		G	O
E				A		S				F		M
	A	N	A	L	Y	T	I	C	A	L		P
N		I		V		A		A		E		L
A	S	C	I	I		L		T	R	A	C	E
G		H		N		I		S				T
A		E	N	G	I	N	E		E	D	G	E

I'm on a sea food diet. I see food, I eat it.

Can February March? No, but April May.

I stayed up all nite to see where the sun went. Then it dawn'ed on me. - dedicated for COMP2121

Started a band called 1023MB. Never got a Gig.

Han Solo: Looking for love in Alderaan places.

What did batman say to Robin before getting in the car? Get in the car.

PMS Jokes are horrible. Period.

What do you call an alligator in a vest? An investigator.

WRITTEN BY OLIVER TAN
 DEDICATED TO JOSHUA ELLIOT

News in Brief

Unintended Erection

The People's Daily is used to breaking news, but recently it became the news itself after some dirty minds realised something embarrassing for the company. The People's Daily, the leading Chinese newspaper and mouthpiece for the ruling Communist Party, are getting a new headquarters built for them in Beijing. However, the 150m unfinished and scaffold-covered building unfortunately looks a lot like a certain gentleman's part. Users on Sina Weibo, China's Twitter equivalent, predictably became amused by the building's odd shape, until the government decided to be dicks and censored all links and photos of the unfortunate erection.

Working As Intended?

A man accused of shoplifting from a thrift store named Finders Keepers is arguing that he was simply confused by the shop's name. Surveillance video at the store shows the man helping himself to what he says was free merchandise. He explained how he thought the items on the porch were there for people to take. The official site for Finders Keepers explains that portion of its items "are donations, in which the proceeds of those items go to help purchasing 'needs' of local community organizations specifically to help children in need." He has since returned all the stolen items back to the shop. No word on whether or not criminal charges were filed, or whether or not the store will be

renamed to "Not For Free".

Let's Do Our Brit

The British National Party has a slightly offbeat call to action for its members. The BNP has urged all its members to procreate after it lost every seat it contested in Thursday's local elections. The party fielded 99 candidates, but did not win a single seat, even losing one of the council seats it held. In a post on their website, the party has suggested members to have bigger families to counter large families had by non-Britons. Many people have simply passed the announcement as a way to screw with the public and gain more attention after their poor election results.

And the award for Prom Idiot goes to....

An American high school has committed a major oops, rescheduling its prom night and forgetting to tell its students. On the night of April 27th, students of Bloomington High School were dressed up and ready to party until they learned at the venue that there was no party that day. The school's principal has taken responsibility and blamed "a miscommunication between the school and event organiser" for the major snafu. The venue scrambled to provide the students with music and snacks, but perhaps should go back to school on how to organise a prom.

WRITTEN BY PATRICK CHUNG

CSE EVENTS & SOCIETIES

Upcoming Events

CSESoc Weekly BBQ

Every Monday, 12:30pm - 1:30pm

Physics Lawn

FREE FOOD! Same time, same location, we will be there no matter rain or shine.

CSESoc CardBoard Night

Thursday, May 9th, 6:30p till late

k17 Seminar Room

Cost:\$3 Arc/ \$5 Non-Arc

Join us for a fun night with card and board games, and as always there will pizza, snacks and drinks. Also please don't hesitate to bring any games you'd like to play on the night!

CSESoc and CSE Revue go to Med Revue

Thursday, May 16th, 7:30pm

Science Theatre

Cost: \$10

This year, Med Revue presents "Cirque du Surgery", a comedy

stage show full of live skits, video clips, singing, dancing and the prescribed dose of medicinal hilarity.

\$10 is only for CSESoc and CSE Revue members when you attend with us (Thursday night only)! On the night. There will be a setup for our members to pay at the door.

ENGsoc Ball

Friday, June 7th, 6:00pm - 7:00pm

RoundHouse

Cost: \$70 Arc/ \$90 Non-Arc

You're invited to UNSW ENGSOCS third annual Engineering Ball. The event includes a three course meal, and drinks throughout the night. Partners are welcome, so bring them along and have a good night. Ticket Sale online at: <http://www.unswengsoc.com/tickets/>

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