

THE FISHWRAP

Official newsletter of the Engineering Student Society stream A

All the news that's fit to wrap your fish in, since 1988

Monday, June 27, 2011

Fishue 0100

Ln(day) July 9th!

Following the outrageous success of BBQ by the Beach, Ln(day) is happening July 9th! For those of you who missed out, it was a fun, relaxed day full of games, food, and friends, both new and old. Cheeseburgers were \$2.50, corn 50¢, and prizes were given for the winners of the games tournament. This time, it continues to be free to come, and we

have booked a lawn at Mt. Doug park (same as last time), which is at the corner of Cordova Bay road and Ash. If you missed BBQBTB, Don't let this one pass you by as well!

Any questions can be directed to Nigel at nsyro@uvic.ca, or swing by the ESS office.

LAN Party Recap

Last Friday, we proved that LAN parties aren't just for nerds. Engineering and CSC students alike filled 3 labs in the 2nd floor of the ECS at the first ever ESS/CSCU combined LAN party. The action got started around 7:30, with Starcraft, Age of Empires 2, Worms, and even some epic games of Tron. Oh, and of course Team Fortress 2, where I personally mowed down wave after wave of red scum with my trusty minigun Natascha.

It was then time to consume over \$600 of free pizza. After pizza came the CSCU

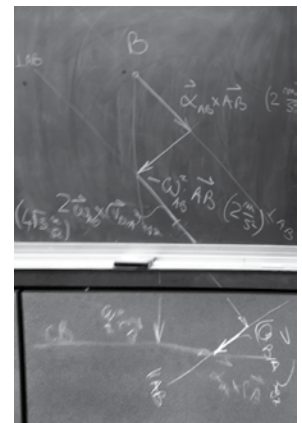
LAN party tradition of Savage. Savage is a team-based game that's a lot of fun even if you're not much of a gamer. It's even more fun when you have 30 engineers in one lab vs 30 CSC students in the other. Although there were some hiccups with our first-time commander in the first couple games, once we got an experienced commander in charge, we defeated the CSC team quite resoundingly.

The LAN party was awesome, and I highly recommend you come to any future LAN parties!

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Picture of the week
submitted by Aaron
Campbell



Heard a prof or fellow student say something embarrassing or incriminating? Send it to fishwrap@engr.uvic.ca

"That's what my scale tells me. Either the numbers are wrong or my scale is bullshit." -D. Constantinescu, Mech 242

"Dubstep might actually be more repetitive than Nyan Cat" -2B student

"You go home from my class and you say, 'What the hell is happening?'"
-F. Gebaldi, CEng 241

"I think I like poo." -Austin Warren

Events & Announcements



UVEC

Registration for the UVic Engineering Competition is still open! The competition is being held in the ECS lobby on Saturday, July 16th at 9:00 AM. Winners will also qualify for the Western Engineering Competition in Calgary. Categories include:



Senior Team Design: Teams of third and fourth year students (including students currently in 2B) have 8 hours to implement a solution to a design problem.

Innovative Design: Present an innovative and commercially viable solution to a problem of your choosing. This includes market research and a business proposal.

Consulting Engineering: Teams of four have 5 hours to devise an innovative solution to a real-world problem, including economic and social aspects.

Engineering Communications: Describe a technical subject in layman's terms and present a structured analysis of its societal and environmental impacts.

Impromptu Debate: Teams of two members must defend, from a given viewpoint, a topic disclosed just before the debate.

To register, or for more information, go to ess.uvic.ca!

Give co-op site feedback, win ESS schwag!

The co-op office wants your feedback on the new site. Go to ess.uvic.ca/coopfeedback (or scan the QR code) to fill out the feedback form. You can fill it out anonymously if you like.

By giving your feedback, you will be entered into a draw to win 1 of 3 ESS bandanas or shot glasses.



Next EEE July 22nd!

The next Engineering Evening Excursion will be happening on Friday, July 22nd. More details to come...

Slushie Fridays

Still happening every Friday in the ESS office. Slushies are free, cups 50¢

What happened in the ESS this week

- The ESS office was cleaned
- Canada Post went on strike, delaying our foosball part order. In the meantime, temporary replacement bars have been put on the foosball table.
- The computer was reformatted
- UVic's FTP server is down, causing this issue of Fishwrap not to be online (yet).
- We were welcomed to the ESS meeting with a beautiful song.
- Austin dropped anchor. There was Fulch everywhere.
- Girls: 1 / Tyler: 0

The Love Engineer

The Rules of Being a Well-Sought-After Guy

How does one become a guy that every girl wants? One must know the basic girl rules, and possess these qualities. A guy must know how to understand a girl, when to read a girl, and when enough is enough! But a guy should never break the secret rules:

Rule #1: A guy must know when enough is enough

If you are going after a girl, and she isn't interested (I don't mean she's playing hard to get. I mean she is SERIOUSLY not interested), do not be the guy that keeps on persisting and ends up creeping her out. Girls hate creeps.

Rule #2: A guy must never be annoying, needy or b**** about things

The above is for a girl to do, minus the first one. Your job is to cater to the female, not be the female.

Rule #3: A guy should never be high maintenance.

The average girl spends around 20 minutes getting ready (some take longer). YOUR "getting ready" time should be $<$, never \geq to.

Rule #4: In times of trouble, you will stand up for your woman and protect her in all circumstances.

You are the man in the relationship, not the girl. Get over it!

Rule #5: You should never make your girl wait.

I personally hate it when the guy wastes my time or I show up at their house and they're like "give me 30 minutes while I do chores". Girlfriends/prospective ones/crushes should be a high priority!

Rule #6: Don't be a wimp.

You should NEVER EVER ask your friend to ask your

crushes friend to see if her friend likes you. You are not in grade 6. Man up and ask her yourself. If you face rejection it will help to make you stronger and show you are not afraid of being turned down. If you are turned down you probably didn't put enough effort into wooing her in the first place. And don't get your guy groupie to help set you up.

Rule #7: Do not boast about yourself and degrade a females' feelings.

If your girl/crush is not as talented or as smart as you, do not boast about yourself and make her feel worthless. That is just terrible! It's literally saying "I'm better than you." Instead, stay humble and she will eventually find out through time. If you have special talents, you can use that to surprise her and do something romantic because all girls love romantic guys.

XKCD: Ohm's Law



OHM NEVER FORGOT HIS DYING UNCLE'S ADVICE.

Calculator Nerd

Set Phasors to “Solved”

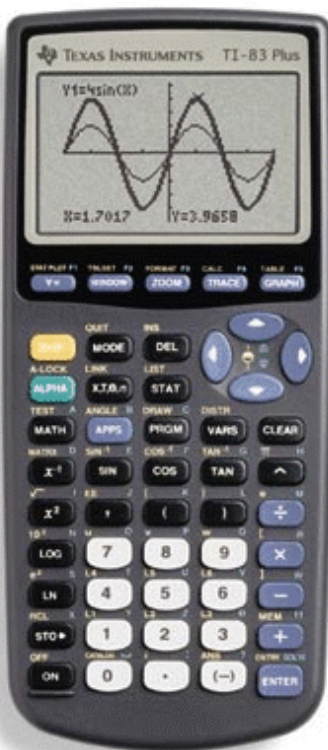
How to Use Your Calculator for Phasors

Although most calculators won't directly take phasors, many will take complex numbers in polar form (remember that a phasor is just a convenient way of writing a complex number; $R\angle\theta$ is the same thing as $Re^{i\theta}$). If your calculator can take complex numbers, then you can do math with them. The best part is that your calculator probably doesn't care whether you enter them in rectangular or polar form. Want to multiply two complex numbers in rectangular form? Just punch it in and your calculator will do the conversion for you. Want to add two phasors? Same deal. Divide a phasor by a rectangular? Easy.

Two things to remember:

- put your calculator in degrees first (unless you actually want your phasors in radians)
- use brackets around complex numbers when necessary.

$3+2i * 4-i$ is different than $(3+2i) * (4-i)$



TI-83/84

To use complex numbers on a TI-83, first it needs to be in a complex mode. Press [MODE] to get to the mode screen. Scroll down to where “real” is probably selected, then select either “a+bi” or “re^θi” and press [ENTER] to choose whether you want complex numbers displayed in rectangular or polar form by default.

To enter “i” into an equation, use [2nd] [.]. For Polar form, use the “e^x” function at [2ND] [LN].

If you get an answer in rectangular form and you want it in polar (or vice versa), or if you just want to convert a number between forms, enter the number (or use the “ans” function at [2nd] [(-)] for your previous answer) and use either the ►Rect or ►Polar function, found by pressing [MATH] and then scrolling over to “CPX”.

TI-89

Complex numbers on a TI-89 are similar to on a TI-83. First, choose a complex mode. Press the [MODE] key and scroll down to “Vector Format”. Press the right arrow and select either “Rectangular” or “Polar” to specify how complex numbers should be displayed by default. Press [ENTER] to exit the menu, because using [ESC] would clear any changes you made.

To enter “ i ” into an equation, use [2ND] [CATALOG].

One nice feature of a TI-89 is the ability to enter a phasor directly (rather than having to use exponential form). For the “ \angle ” sign, press [2ND] [EE]. It also has to be enclosed by brackets or else it won’t work.

To convert between rectangular and polar form, use the “►Rect” and “►Polar” functions just like on an 83. Although you can probably find these in a menu (I’m sure it’s somewhere, but I still haven’t found it), it is easiest to type them in directly. The “►” character can be found at [2ND] [MODE].

As with all TI-89 functions, if you want decimals instead of exact values press [♦] [ENTER] for the “ \approx ” function, which will always return a decimal value. You can also set all answers to default to decimal value by choosing “Exact/Approx > Approximate” under [MODE].

A TI-89 can also take complex numbers in matrices, and they can be entered in either form.



Sharp EL-510R

(a.k.a. “the Math department calculator”)

Although this calculator can’t take imaginary numbers, surprisingly it can translate between rectangular and polar coordinates quite easily:

1. Make sure your calculator is in the correct angular mode (degrees/radians). Use the [DRG] key to switch modes.
2. Enter your rectangular values, separated by a comma (for the comma, press [2nd F] [STO])
3. Press [2nd F] [8] for the function “ $\rightarrow r\theta$ ”
4. The radius of the polar coordinate is now displayed. To switch between displaying radius and angle, use the “ \leftarrow, \rightarrow ” function, found by pressing [2nd F] [ANS]



To convert from a phasor to rectangular form, do the same process except using [$\rightarrow xy$] ([2nd F] [9]) instead.

To convert $3 + 4i$ to a phasor, enter:

[3] [,] [4] [$\rightarrow r\theta$]

This displays the magnitude of the phasor. Then use “ \leftarrow, \rightarrow ” to display the angle.

To convert $(5 \angle 30^\circ)$ to rectangular form, enter:

[5] [,] [3] [0] [$\rightarrow xy$]

This displays the X (real) component. Then use “ \leftarrow, \rightarrow ” to display the Y (imaginary) component.

What Grinds My Gears

Premium Digital Cables

To be honest, I'm a little torn on this. There's a part of me that enjoys seeing people waste money because they don't know what "digital" means. It's the same reason I don't mind when people buy lottery tickets: it's like natural selection for money. Plus, I know that an electrical engineer somewhere is making a ton of money for figuring out ways of cramming more and more gold and platinum into a cable, and someday that engineer might be me.

But no. As a future electrical engineer, it is my ethical responsibility to help people avoid this kind of crap.

The problem is, there are a lot of plausible-sounding pseudoscientific arguments for expensive digital cables; a little knowledge is a dangerous thing. Home theater "experts" who believe these snake-oil arguments publish reviews of the newest HDMI cables, causing Best Buy employees to believe they have to sell you a \$200 Monster HDMI cable for you to get the most out of your new home theater.

Although cables can make a difference in an analog signal (although how much of a difference they *actually* make is debatable), a digital signal is a whole different story. Digital means it is 1 or 0. The slight capacitance a cable has will not affect the data content the way it does with an analog signal. If a digital signal is clean enough, the receiver will receive all of it; if not, it will receive very little of it, and be incredibly glitchy. I've heard arguments that cheaper cables (or even cheap CD-Rs) can drop a few bits, but in reality, if even a single bit of a video signal is dropped, you would notice a glitchy picture or an obvious audio blip.

The worst offender in all this is Denon. The Denon AK-DL1 (pictured) is a 1.5m Ethernet cable... for \$500. I



kid you not. Here's the description from Denon's own website:

Denon's 1.5 meter (59 in.) proprietary ultra premium Denon Link cable was designed for the audio enthusiast. Made from high purity copper wire and high performance connection parts, the AK-DL1 will bring out all the nuances in digital audio reproduction from any of our Denon DVD players with the Denon Link feature connected to a Denon Link enabled Denon A/V receiver. The AK-DL1 employs high level tin-bearing alloy shielding not typically available in commercial cabling, to eliminate data loss caused by noise. Additionally, signal directional markings are provided for optimum signal transfer. Attention to detail when building this cable was used by employing high quality insulation and woven jacketing to reduce vibration and to add durability. Rounded plug levers help prevent breakage.

Okay, so it's an extremely well-shielded cable. But better shielding won't improve the content of a digital signal, it will just improve the likelihood of the cable being usable in a noisy environment (when it needs to run hundreds of feet). Besides, Ethernet cables are already quite immune to noise, since they employ twisted pairs to cancel most of it out.

And signal direction markings? Seriously? The engineers at Denon must be laughing their asses off at how gullible people are (unless the cable is actually made entirely of diodes).

There's a sucker born every minute, and unfortunately it seems many of those suckers write for home theater magazines.

Engr-Scopes by P. Gordon



Aquarius (Jan 20 - Feb 18)
You're going to get cow pox. If you don't like it, you can take it up with Saturn.



Leo (Jul 23 - Aug 22)
It's time to stop holding everything so close to your chest. Share an insight or a secret - maybe the answers to this week's assignment.

Pisces (Feb 19 - Mar 20)

Your busy schedule has calmed down, so you can focus on your first love, the ukulele.



Virgo (Aug 23 - Sep 22)

The number 7032 does not hold special significance for you this week.



Aries (Mar 21 - Apr 19)

Travel over water and the mole people will lose your scent. Do this soon. They're hot on your trail!



Libra (Sep 23 - Oct 22)

Last week's lunar eclipse turned you into a werewolf, and not the sexy kind.

Taurus (Apr 20 - May 20)

As you charge into new territory this week, don't trample any conquestadors, Taurus. By this, of course, I mean study hard.



Scorpio (Oct 23 - Nov 21)

Be open to the suggestions of others this week, Scorpio - except Mike's, he doesn't know what he's talking about.



Gemini (May 21 - Jun 20)

You feel like Goldilocks: everything is too hard or too easy, but soon something will come along which is just awful.



Sagittarius (Nov 22 - Dec 21)

The second letter of the fifty-third word each of your friends says to you today will spell out your destiny.



Cancer (Jun 21 - Jul 22)

Make a list of what you'd love to do in the future, when you have time and money. Work on forgetting these things.

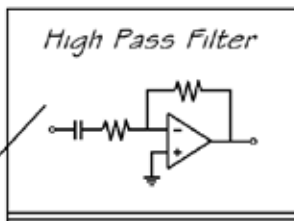


Capricorn (Dec 22 - Jan 19)

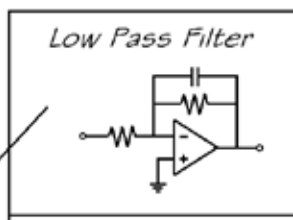
Are group projects getting your goat? Lower your standards and make wiser choices.

Comic by Flash and Nesbitt

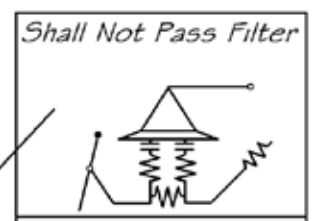
Placing a capacitor in series with a resistor into your negative terminus will result in a "High Pass" filter. This effectively reduces any high frequency noise.



A capacitor coupled in parallel with a resistor in the feedback loop will give you a "Low Pass" filter. This allows low frequency noise to be eliminated from the output signal.



A third arrangement results in a "No Pass," or "Gandalf" filter. This is particularly useful in preventing demons born of shadow and flame from entering your circuit.

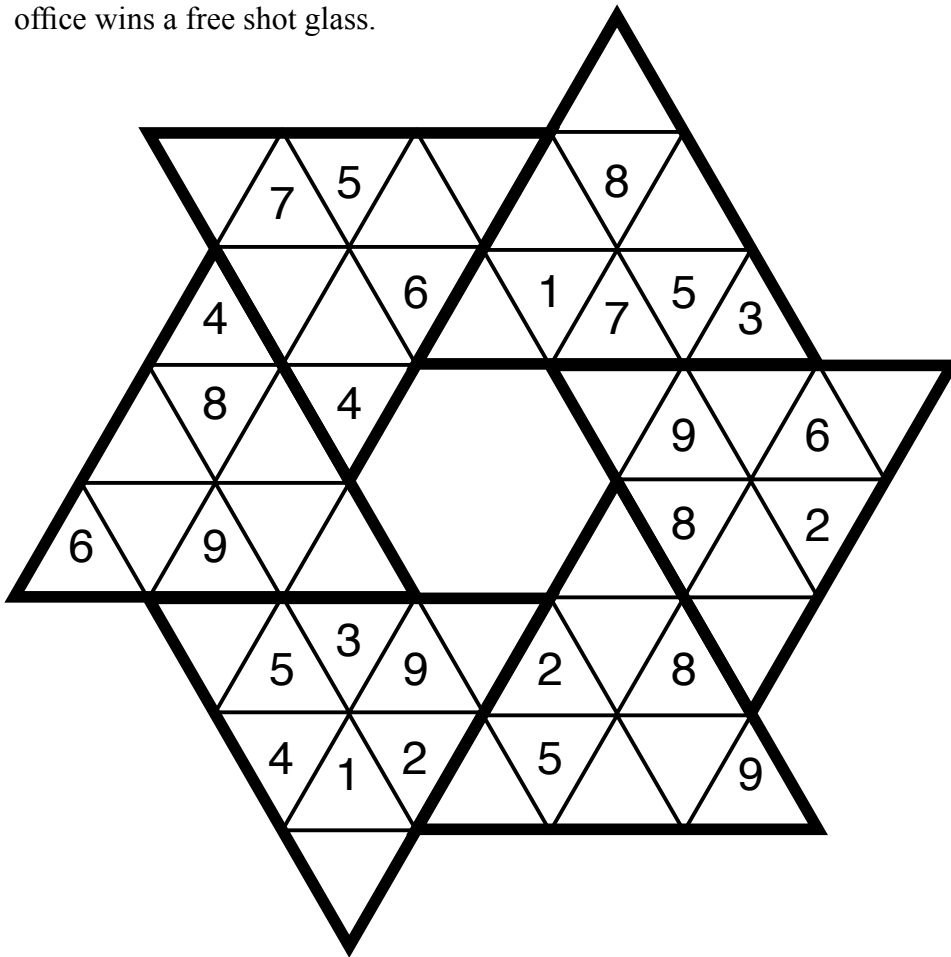


The Fun Page!

Ninja Star Sudoku

This works like regular Sudoku, except with 3 directions of rows instead of 2 (horizontal, +60° and -60°). Rows continue over the center gap. Note that some rows only contain 8 numbers (these rows will be missing one number, but not necessarily 9).

As usual, the first person to bring this completed Sudoku to the ESS office wins a free shot glass.



Editor's Note

Okay, I lied. This page isn't fun at all. That Sudoku is painful. This week, whenever I've been working on Fishwrap in class (err, I mean... *not* in class... yeah...) and had this page open, people have glanced over my shoulder and gone "ugh" as if to say "you're a terrible person and I'm pretty sure that Sudoku defies the Geneva convention's laws on torture."

Got something you want to see in Fishwrap? Send it to fishwrap@engr.uvic.ca

Joel Geddert
ESS Director of Communications

This week's Contributors:

- Golden Perogi
- Flash Gordon
- Justin Nesbitt
- Piper Gordon
- Tiffany Yu
- Nigel Syrotuck
- Aaron Campbell

MENTAL DEPREDATION

by Golden Perogi

<p>SONYA BLADE RAIDEN</p> <p>FINISH HIM!</p>	<p>SONYA BLADE RAIDEN</p>	<p>If a relaxing moment turns into the right moment, will you be ready?</p>
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