

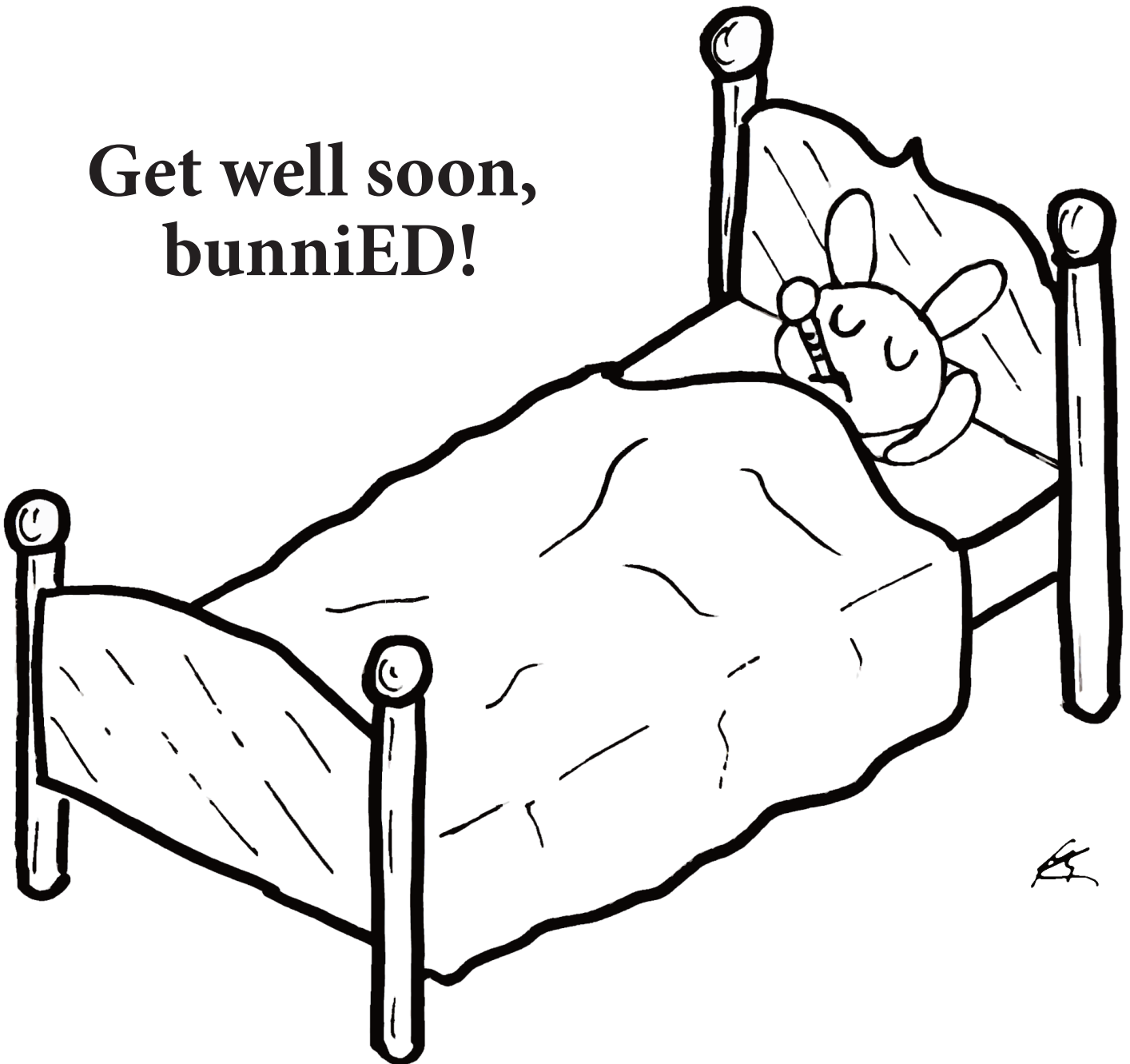
math

NEWS

Volume 130, Issue 6

Friday, March 25th, 2016

Get well soon,
bunniED!



lookAHEAD**mathNEWS**

March 25 Issue 6 faces its destiny

MathSoc

April 2–3 24-Hour Games Night

April 5 MathSoc Volunteer Appreciation

University

Mar 25–Apr 23 The remainder of term, gods help us all.

March 25 Good Friday

April 4 Make-up day (Friday schedule)

April 6 Final Examination "Study" days

April 7 On-Campus Final Examinations start

April 23 On-Campus Final Examinations end

Miscellaneous

April 1 April Fool's Day

April 7 World Health Day

April 9 Vimy Ridge Day

April 16 Record Store Day

April 20 420BLAZEIT

April 21 The Day Without Snacks

April 22 Earth Day

April 23 St. George's Day

Article of the Issue

This issue's article of the issue is "A Review of PHYS 124 - Modern Physics", written by Pi Guy. Come by our office to pick up your prize!

The Editors

George Lambrou ("Drop it on one of its corners a few times.");

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George Lambrou (Hoenn), Amy Li (Kanto), Elizabeth Liu (Unova), Katherine Tu (Johto), Jose-Miguel Velasco (Sinnoh)

mastHEAD

Day in and day out, we work towards a mythical "end": a day upon which — either through the work of miracles, or simply misguided judgement — we are deemed to be worthy, educated adults, and handed pieces of paper to cement this title.

While we have no way of knowing whether or not these legends are true, we *do* have *mathNEWS*, our benevolent provider of comfort, solace, and purpose through these turbulent and uncertain days; our merciless killer of time in between assignments, exams, and lectures; and our suppressor of feelings of hopelessness and low self-esteem at our darkest moments. Thanks, *mathNEWS*!

Of course, it wouldn't be *mathNEWS* without a semi-topical *mastHEAD* question, and this week we've decided to cover the FBI vs. Apple debate, since we didn't have any other ideas, and we're pretty sure the FBI doesn't read *mathNEWS* anyway, so we wouldn't get put on some kind of list.

This week's question: "How would you crack the FBI?"

Cryptic Panda ("Dank memes"); $s, t \in \{2k, k \in \mathbb{Z}\}$, 144 ("1000 moneys, 1000 typewriters"); Hat of Chocolate ("while true; do cat /dev/urandom | super-nsa-decryptor; done"); Zethar ("Surely the hole-filled facade needs not more cracks.") algoweird ("Through the back door"); waldo@3.LE-GASP.ca ("F|B|I or FBI, either should work."); JahBird ("With my feminine wiles"); Ethu ("a joke"); G UNIT ("with a large hammer"); TheUndecided ("with a crackhouse"); Shay Blair ("call them telling them their windows has a virus, and they need to take the following steps to clean it"); Beyond Meta ("Break the fourth wall"); Hadrön ("call Fox Mulder"); Dusk Eagle ("I can't reveal my methods"); Diminutive Rex ("Sensually"); {ockets ("From within"); Pi Guy ("By applying my knowledge from CS458"); Soviet Canadian ("on the side of the pan, two strikes"); Element ("I would insert a butt joke")

Games Sez

The last week of term is upon us, and with that, 24-Hours Games Night! The event starts at noon of April 2th, and as the name implies, goes on until noon of the following day. Snacks and drinks will be provided as always, and there are even rumours that dinner will be provided — though anyone who has attended any such event will tell you those are, in fact, more than just rumours. The event is a great way to try out tons of quick, short games. or to play that really really long game of Diplomacy you've been planning all term (you have been planning that, right?).

Also, if you hurry, you might be able to add an item to be considered for acquisitions.

Your Games Director,
a crafty player

Stop the Stigma: Addressing Mental Health Stigma on Campus

Mental illness. The very term itself is a code word. Some may think “sick”, “insane”, “overly sensitive” or “unstable”. But that’s just “crazy” talk! It is a sad reality that the stereotypes and stigma associated with mental health are similar today to the retrograde feelings people had towards HIV/AIDS a generation ago. While attitudes towards AIDS as a manageable health condition have changed, people still think to ostracize others experiencing a range of mental health issues. 42% of Canadians are unsure whether they would socialize with a friend who has a mental illness. Almost half think people use the term mental illness as an excuse for bad behaviour, and just over a quarter say they would be fearful of being around someone who suffers from serious mental illness. However, people living with mental health issues or mental illnesses can and do have happy and successful lives!

Part of the problem is that as a term, mental illness suggests a sinkhole of sickness, a trough so deep that only special persons are thought to inhabit it. And that they are lifers! In our stereotypes, we condemn such people to a solitary and eternal prison cell of other-ness and shame. By doing so, we justify and rationalize some of our own issues we go through: chronic stress, anxiety, and other issues that are never thought to be part of the continuum of mental health, and therefore are left unaddressed within ourselves. We don’t have issues! We can never be “sick” like that. Likewise, we also tend to exoticize mental health. But the fact is, if you have a mind, you have mental health! You can choose how to regulate your daily mental health – similar to your physical fitness – in how you respond to everyday occurrences and stressors.

Students in university undergo a lot of stress and anxiety, and therefore, are at a higher risk than the rest of the population for mental health issues. In a multi-country study conducted by the World Health Organization, Canadian students were among the most likely to report feeling depressed for a week or more, with estimates ranging from a quarter to over one third, depending on age and gender. Whether it is overloading on courses, taking on a vortex of midterm exams in one week, pulling all nighters to finish class assignments, or having endless labs and meetings to finish term projects. Chronic stress from these activities can take their toll. If unaddressed, this can lead to mild depression, feelings of low self worth or apathy. In some persons, this can develop into more serious conditions. However it is not the condition that is necessarily problematic; it is the dogmatic belief that we can get through it alone, tough it out, to “be a man.”

Part of the problem is the aforementioned stigma associated with persons undergoing such conditions. If our feelings and mental health issues are voiced to our friends, we’re afraid they might be withdrawn and ostracize us, not include us in

CS Fact of the Week!

In Java, you can violate your children if they are also your parent's children! Gotta keep the incest rollin'!

future social activities, and view us as categorically different and unredeemable. If you notice a friend saying that they don’t want to invite or hangout with someone because they’re acting “weird”, voice your concern, as well all have the responsibility to take steps to reduce stigma. Our social group on campus is – or should be – our first line of defense against mental health problems, the canary in the coal mine so to speak. Our friends and project buddies are the people who interact with us daily over a long period of time, and can therefore spot any changes or worrying trends in our personality and behaviour, be it in class, or when hanging out. They can easily notice a change in our appearance, or a deterioration in the quality of our work on assignments and group projects. Other signs could be frequent heightened or alarmed responses to changes in schedules or assignments.

When we ourselves are undergoing such issues, or notice someone in our peer group with these signs, and they persist, it is important we set aside time to start a candid conversation. In fact, it is our duty to do so, since a true friend will tell it like it is and not ignore such issues, and will seek to help out. Not doing so can lead to worse symptoms and more severe conditions experienced by our friend that will impair their quality of life. In certain cases, it can even result in tragic and irreversible outcomes. It is imperative for us to be non-judgemental and listen with a sympathetic ear to our friend. We all go through such issues, and being down in our mental health is nothing to be ashamed of. There is hope – people can and do recover from mental health issues. It is essential to recommend seeing a counsellor, if even just to talk about the issues and stressors a friend might be going through. There is no commitment, and there should be no stigma, to talk with someone new – outside of one’s familiar peer group – who can be a sounding board, and who is a professional regarding these issues to boot.

We all struggle with the daily grind, and as long as we are conscious beings we all have our mental health to take care of and safeguard. Being mindful of chronic stress in one’s self, or among our friends, is important so that we can alert them before it leads to something more serious. Tell them to relax and take a break. In some circumstances, it may be necessary to think about seeing a mental health professional. We are not defined by our mental health issues or mental illnesses. We see specialists all the time if we have issues with the stuff we own, whether it be a car or a phone, or our physical selves. Why not start treating our mind as the precious resource that it is, and accord it a measure of respect and professional care? It will thank you for it!

Here’s to your peace of mind!

QED

Hey klubs! Want your Kommandant Sez in *математическая*NEWS? Then submit today! Or we are going on vacation tomorrow.

HeForShe

Because She's a Girl

You've probably heard it. Maybe you've even said it yourself, or thought it: Suzy (or whoever) got that job offer, that interview, that scholarship because she's a girl.

There are lots of problems with this kind of thinking, but the two biggest problems are (1) it's not true and (2) these kinds of micro-aggressions are part of the reason that there are fewer women than men in STEM programs.

Because He's a Guy

Actually, studies have repeatedly shown that it is men, not women, who benefit from their gender when it comes to hiring and promotion. There is widespread implicit bias, among both men and women, that men are better than women at math and computing. There is no scientific basis for this bias, yet the bias persists and it adversely affects managers' evaluations of female job candidates. Given identical resumes for men and women job candidates, managers will on average rate male candidates slightly higher than female candidates. Moreover, male candidates are more likely to be judged on their potential whereas female candidates are more likely to be judged on their past accomplishments.

When it comes to UW students, there is no difference in the grade-point averages of male vs. female students. So, of course the female students should be getting good job interviews and offers! It's good to see that many of them are.

Micro-aggressions

The biggest differences between male and female Math students are not their innate mathematical or programming abilities. The biggest difference is that most male students have

been encouraged throughout their lives to pursue math, science, computing, and engineering, sometimes to the exclusion of other activities, whereas most female students who express an interest in STEM are repeatedly questioned and discouraged – by family, teachers, school counsellors, peers, the media, or all of the above – and are encouraged to pursue other interests. The female students who make it to Waterloo have persisted in STEM despite these discouragements. They don't need further discouragements from their male peers.

Saying that a female student got an interview or job because she is female suggests that she is less qualified than other candidates. If you believe this, read again the above section "Because He's a Guy". If you make such statements just to make women mad or to take them down a notch — that's pretty sad. When students say things like this, they are part of the problem. They contribute to the micro-aggressions and discouragements to which the female students are repeatedly subjected.

Don't be part of the problem.

Topics of HeForShe columns depend on your questions. Send your questions, comments, ideas, etc. to mathheforshe@uwaterloo.ca. Anonymous questions are welcomed.

Join the HeForShe Math Facebook Group! Join the Math Faculty HeForShe Working Group!

<https://lists.uwaterloo.ca/mailman/listinfo/math-equity-wg>

Jo Atlee,
Computer Science, Math Faculty HeForShe Advocate

Francis Poulin,
Applied Mathematics, HeForShe Advocate

Sum Highly Derivative Puns

What is Sonic's favourite cycloid? A brachistocrone.

Why would $x^2 + 1$ be a bad tree? Because it doesn't have any real roots.

What's the difference between the set of all birds and the set of all bears? The set of all birds has a definite cardinality.

How did the mathematician know that Jacob Marley's performance was very derivative? They used the chain rule.

If a doctor works out of his own house, is it a non-commutative operation?

If I'm wearing my converse, I'm going outside. If I'm going outside, I'm wearing my converse.

I tried to fix my car, and now it's stuck in the driveway.

Why is 1.414 so good at surfing? It's radical, dude!

The mascot of the No Child Left Behind program should be a tautochrone.

I wish real life were more like math: if a radical isn't positive, it's imaginary.

Diminutive Rex

On Emo Teenage Girls

I was sixteen when I suspected I had clinical depression, after the death of a relative and a month of overwhelming self-hatred. I told my mother, who said that she remembered feeling the same way when she was young, and that it would go away when I was seventeen. She reluctantly took me to a physician anyway, who told me I needed to join more clubs (I was already in very many clubs in high school, and led two of them) and find more friends. I attempted suicide for the first time a day later. About six months later, I saw a counselor, who refused to believe I had depression because I had not suffered childhood trauma, and therefore had no reason to. My seventeenth birthday came and went, and I eventually had medication prescribed to me by a different doctor. Everyone but my English teachers and a handful of my online friends discouraged me from taking it; they believed that depression was a characteristic weakness. I was foolish enough to believe them.

Given what I had gone through, it's no wonder to me why kids and teenagers refuse to seek medical attention for things like depression. It's also no surprise to me that they would turn to online communities for solace, as I did. People joke about emo teenage girls on LiveJournal (or, in recent times, Tumblr) all of the time — and I was one of them. A few years ago, I showed my friend some of my old LiveJournal posts, a number of which I used to share morbid fantasies of being dead, and they jokingly asked me, "Why so sad?" Because (surprise!) I had fucking clinical depression, and they /knew/ that. This friend isn't even the type to be insensitive; it just seems to be a knee-jerk reaction to mock teenage girls. There are people, remarkably many of those who have never had depression, who argue that the prevalence of "emo" teens on Internet communities trivializes or romanticizes "real" depression. In my experience, however, most of these people do display symptoms of depression, whether or not they have been officially diagnosed. They really do not need anonymous jerks on the Internet to stop "faking" their illness. If more people had taken me seriously when I was younger, maybe I wouldn't be a disgusting mess in my twenties.

emo cat

Not Ice

The validity of the Feds General Meeting this week is in jeopardy. According to the Feds By-Laws, section V.B, "Initial notice of a General Meeting must be given no more than thirty (30) days before the meeting...", and it was brought to the general public's opinion that on the morning of Monday, March 21st, when the Laurel Creek iced over. Thus there had not been thirty (30) days of not ice before the meeting on the 23rd of March, which would invalidate the meeting.

Since this article is written on the eve of the Monday in question, *mathNEWS* is unable to reach anyone in Feds for comment for comment.

Zethar

The Secret Behind *prof*QUOTES

Waterloo is known for its amazing mathematics professors and we students pay quite the fortune for their lessons. This would be great if we actually cared about math, but I, for one, am more concerned with crippling student debt. In an effort to reduce costs in this faculty, I have analyzed why we have such good tenured professors, and discovered how to best rid ourselves of their salaries.

There are three primary reasons why professors teach math:

1. They enjoy spreading knowledge to others.
2. They get paid to.
3. Their careers as stand-up comedians fell through.

The first reason is mostly mitigated by failing tests and exams, not visiting TAs or office hours, or by being in first year. However, professors do not seem to mind throwing curves at the problem to boost their self-esteem regarding their teaching prowess.

Professors being paid to teach is not something we students can affect — as long as the fees keep going up. Perhaps by alienating the international students, we could bankrupt the faculty and reduce salaries that way. Oh wait, you can't alienate a group that is already alienating you. Never mind then.

The third reason allows us to execute our coup de grâce. By submitting *prof*QUOTES, we convince math professors that their boring wit is actually entertaining. They are so daft that they read their quotes and think: "Wow, that is comic genius. I should use that every term." As their confidence grows, professors come to realize that if they can entertain the silent soulless students of a math class, then they can entertain anyone! Then the weight of their failed dreams will come crushing down, destroying their will to teach, and sending them of to an early sabbatical.

sLAUGHTER



I USUALLY LEAVE OUT DIACRITICS WHEN I TYPE, SO I MAKE UP FOR IT BY OCCASIONALLY ADDING A WHOLE BUNCH AT ONCE.

Image Source: <http://xkcd.com/1647/>, © 2016 Randall Munroe

On Curiosity in Mathematics

Allow me to start this article with a digression about myself. I don't really remember when I decided that I truly loved mathematics; I know I was good at it as a child, but I wasn't curious about it, in the way that children devour information about dinosaurs or space, for instance, or immerse themselves in fantasy worlds using books or games or (gasp) their imaginations. Later, in high school, I'd learned a bit more about it, and had seen it be useful in various scenarios, and started to study math at a closer-to-university level. Did I love math at that point? Again, I'm not sure; I applied to various universities for things like 'Mathematical Physics', but I eventually went to Waterloo for 'Mathematics'.

Over the Christmas break in first year, I read my floormate's copy of *A Mathematical Mosaic*, by Ravi Vakil (a Canadian mathematician and educator, also a Math Olympiad veteran). I think this book, combined with my experience in first year math, really opened my eyes to what might possibly be waiting for me in the area.* Since then, I've learned about an incredible number of topics in mathematics: epsilons, deltas, graphs, infinite series, prime numbers, dual spaces, dynamical systems, manifolds, measures, and so on. There is so much out there to learn.

So... when do you learn it? Do you only learn mathematics in a class? Do you only learn mathematics when you're presented with material on a chalkboard, and given problems to solve, and handed a test or two where you have to know it or else face repercussions? Do you only learn mathematics when you have the chance to sit down with something and explore it, probe it, ask questions, or find answers for yourself? Do you only really learn mathematics when you're curious about it?

The answer may not be one or the other. Classes are great places to learn mathematics; your instructor knows the material, and the assignments are usually (hopefully) questions which illuminate the material, and force you to think about it in ways you may not have previously foreseen. Often, it is the case that after taking a class, the knowledge can sit in your head for an unspecified amount of time, and then when you go back to it, your new perspective on it will shed fresh light on the subject.

The downside is that classes can be stressful, and sometimes there isn't enough time to learn everything as well as you can or want before you have to move on to something else. Enter casual mathematics – the exploration of mathematics on your own time, at your own pace, following your (mathematical) nose wherever it leads. This might mean picking up a random textbook on the subject and starting at page 1. It might mean starting at page 137, or figuring out why the lines of *Lateralus* sound so weird. It might mean typing a phrase into Google and possibly hitting "I'm Feeling Lucky". It might just mean asking a friend or instructor about this thing you heard about randomly one day. Curiosity takes many, many forms, and everyone approaches it differently.

Curiosity in mathematics can lead you to new connections, the likes of which you maybe never considered. These new connections can open new doors in not just a casual, exploratory sense, but also in a career sense; you never know what opportunities await those who have a broad knowledge base.

This isn't to say being curious about things is easy or effortless. It's challenging to care about both what you're currently trying to study, or do for work, and also about something that you're learning for fun on the side. Balancing those two things can be a struggle. But if you have time, or when you have time, it is highly rewarding, and as you grow in mathematical maturity, it becomes easier to appreciate learning things for the first time, and beginning new investigations into the mystery of mathematics.

If I may quote from the new movie adaptation of *Le Petit Prince*, on the subject of growing up: "Growing up isn't the problem; forgetting is." Never forget that child-like sense of curiosity – it will take you further than you might have ever thought possible.

Scythe Marshall

* Thanks, notbob.

UW Encourages Dark Arts

Deep within the confines of UWaterloo, there exists a sect of people who gather late at night in order to perform black magic. There they study and recite arcane languages and consult the oracles to discover truths about the world. Some use their knowledge to make objects that do their bidding. Certain others learn the language of a snake.

Those that descend into the lowest levels of depravity regularly compel parents to kill their children in order to increase power.

We caution you from approaching these individuals as their

secluded nature makes them unaccustomed to interacting with the general public, not to mention that performing many of their rituals leads them to take on a particular odor that is generally considered unpleasant.

This sect has become so powerful that its members have started performing their dark arts in the public eye with no fear of repercussions. In fact just right now UWaterloo has over 2000 students admitted to the program of computer science.

Beyond Meta

Ace Combat: Assault Horizons

How a Series can Betray You

You are a fan of a series. It could be Star Wars, Harry Potter, The Office, Call of Duty, or whatever. Everyone has series that they enjoy, and that they come back to whenever a new installment is released/aired/etc. Sometimes though, your expectations for a series are betrayed. The quality could be sub par, or the name could be slapped onto something unrelated. Whatever the specific issue, I am curious if there is a word specific to this sort of betrayal of expectations by a series.

An example of this sort of betrayal is Ace Combat: Assault Horizons. This is a 2011/2013 installment in the Ace Combat (AC) video game series I enjoyed. Without researching this game, I bought it during a Steam sale and eagerly installed it. Now, for those without knowledge of AC, it is a series of rather arcade-y aerial dogfighting games that use real-world, modern aircraft, with fake nations and history. AC has never been known for excessive realism, but for someone who does not know the realities of modern air combat, it would appear close enough to reality (besides the insane amount of ammo you carry, jeez). Back to Assault Horizons.

Now, I start up the single-player and am prepared to take to the skies to jink and loop and shoot down some bad guys. The game looks amazing, the story promises to be good, everything is going fine until I try to roll (spin). At that time, I discover that I cannot roll past 60 degrees from the horizontal, and that the game constantly struggles against my input in an attempt to level-out my flight... What? Then the game tells me to push a button when I get behind an enemy. I do as instructed while thinking this is a missile lock-on or some such. Suddenly I am locked into place behind the enemy jet and am instructed that I just need to pull the trigger until the enemy stops being in one piece... WHAT? It was at this point of the tutorial that I hit the Esc key, quit, and uninstalled the game.

With Ace Combat: Assault Horizons, my expectations for an Ace Combat game were met in every aspect, except for the game play (which is sort of important for a video game). I felt cheated, and this should not have been part of a series that I enjoyed. Yet, this sort of thing happens, and I am left with a bad taste in my mouth and the question of what word should be applied to these situations.

Soviet Canadian

Dearly Departed

One of our beloved *mathNEWS* writers, Shay Blair, arrived to production night a few minutes late. Upon deep contemplation, we realized that this made her "the late Shay Blair", and thus dead. We were overcome with grief at her sudden and logically sound passing. Naturally, her death should be reported through only the most legitimate channels: a satirical "mathematics" publication.

It's what she would have wanted.

Shay took her untimely demise quite well, considering the circumstances. Once she had been informed of her death, she accepted it quite gracefully, with none of the usual screaming or wailing that usually comes with this sort of thing. All she asked was that her last words be remembered:

"That wouldn't be the Kickstarter, the reward would be a private pole-danceing show."

Somberly yours,
s,t $\in \{2k, k \in \mathbb{Z}\}$, 144

Science Department Discovers New Bacteria

The University's Science faculty reported Thursday, the discovery of several new kinds of bacteria, which may pose substantial insight into life itself. The discovery came months after a faculty scientist began examining a new incubator they had received from the Mathematics Society. Early 2014, the Mathematics Society had decided to remodel their student lounge, replacing their old large leather couches with colourful suede ones. These leather couches, known breeding grounds for illnesses such as influenza, presented as the perfect specimen for the university's bacteriologists. "The conditions on those couches were absolute perfect", said the scientist, stating that the constant warmth, bodily fluids, and complimentary organisms introduced by the generally unhygienic comfy lounge sleeper were the perfect combination needed for bacterial proliferation.

While they are not sure if the long term effects of exposure to the bacteria will create negative effects, the faculty encourages all students who have taken a couch home to come to their lab for pre-emptive screening. "We don't know whether they've built up an immunity or if they'll develop symptoms of a new illness, but we're making a pre-emptive strike", the faculty spokesperson said, "we've partnered with the student society to provide them all with transitional couches in the meantime". The transitional couches will be sourced from Ikea.

Daijoubu

**Submit your articles to the
BLACK BOX outside the
MC Comfy or email them to
mathNEWS@gmail.com!
... Pretty please?**

Cocks Encryption: The Cocks Controversy

RSA Encryption was allegedly first invented in 1977 by Ron Rivest, Adi Shamir, and Leonard Adleman. But actually, that is not quite^[1] true.

In 1973, Clifford Cocks^[2] left Oxford to join CESG^[3], a division of the British Intelligence Services. Somebody told him about an idea published four years before that was called 'non-secret encryption', and he almost immediately invented RSA encryption^[4].

Unfortunately, Cocks' discovery was kept classified until 1993. This means, when, Rivest, Shamir, and Adleman re-invented it four years later, they got to name it after themselves^[5].

I think this is a tragedy, worse than the Leibniz-Newton calculus controversy^[6], because at least that is acknowledged to exist. Cocks is left entirely in the rain in this whole business, despite clearly having gotten there first.

But we can change this. Personally, I am going to start referring to 'RSA' encryption as Cocks encryption in the future, so that people will become aware of Cliff Cocks and his discovery. I invite you to join me. Drop Cocks into your conversation. Show Cocks to everyone you know. Cocks' obscurity is truly shameful, but together, we can bring Cocks out into the open, for everyone to see.

Diminutive Rex

[1] Only... mostly true.

[2] His actual name.

[3] These are the same people that were in Bletchley Park in the war.

[4] Although it was obviously not named this at the time.

[5] The initials of their last names, if you did not already get it.

[6] Holy shit, this has its own Wikipedia article?!



Rocking the Boat

An Opinion on Taking An Online Course

People are apathetic. You are apathetic, I am apathetic. All students are especially apathetic. Sure, we may all have causes that we are passionate about, but these can be pushed to the back of our minds as we believe there are more pressing issues at hand (generally assignments, midterms and school stuff). But sometimes something stands out as being unfair, and then the question is, will you fight it or go along with it?

This term, I took my first online course by choice (the PDs do not count since we are required to take them). It might have been the worst choice of my academic career so far. It did not help that it was a foreign language course, which really should only be taught in person to ensure listening and oral skills are developed. Other students who took the course on-campus get the advantage of small class sizes, regular feedback from their professor in class and actual lectures. I have heard favourable reviews from students who have taken the course on-campus, but there is not much good to say about the online version.

The online class uses short videos, once every two weeks to try to impart difficult concepts with a minimum of effort for the teaching staff, and almost no feedback. Around every four weeks, there is one paragraph posted to everyone that mentions some errors that were seen in online discussion board postings. This broad, unpersonalized feedback lacks the explanation required for building proper sentences, writing in tenses and having good pronunciation. Additionally, the majority of the term material for the online course comes directly from the textbook, all the better for the instructors who might have gotten tired from the linked language videos that are repeated from prior terms.

For some reason, the University seems to think these should cost the same amount. The only possible rationale for this is the enhanced flexibility the online version offers for student schedules, which is admittedly the reason I chose it over the on-campus option. As the end of term draws closer, I feel a complete lack of confidence in being able to effectively talk at a basic level to anyone else with this language. My written skills are a bit better, but I still likely butcher the syntax (why do other languages have words with gender?!). Overall, it was a frustrating experience that lacked feedback and teaching (1 out of 5 stars, would not recommend).

This course was almost what I needed to challenge my apathy and bring up the issue to the languages department. I made it through two levels of bureaucracy before giving in to the unmovable inertia present in the system. I only hope that this last struggle to get the warning out to math students looking at online courses as potential electives is completed before my apathy once more consumes me. Just remember that you are trading your soul (and perhaps actual education) for what might just appear to be a nicer schedule.

Hadron

How Much Is Fuck?

A Complete Linguistic Analysis

verb (used with object)

1. to have sexual intercourse with.
2. Slang. to treat unfairly or harshly.

verb (used without object)

3. to have sexual intercourse.
4. Slang. to meddle (usually followed by around or with).

noun

6. an act of sexual intercourse.
7. a partner in sexual intercourse.

In this day and age, it is socially acceptable to add “as fuck” to the end of almost any adjective in casual conversation in order to make the adjective more extreme, similar to the way people used to add the word “very” before an adjective once upon a time. For example, my calc TA is hot as fuck. This place is sketchy as fuck. Those geese are scary as fuck. That guy looked like he was high as fuck. It’s cold as fuck outside. But if you think about the word fuck, you’ll realize that no part of the definition (partial definition from dictionary.com included above) of fuck implies that it can be used to intensify adjectives. So then what do people really mean when they say something is (adjective) as fuck? Just how much is fuck? Since fuck has various definitions, it is necessary to explore the phrase on a case-by-case basis.

Hot (attractive/sexy) as fuck — this one actually makes sense if you choose to use the sexual intercourse definition of fuck. In this case, “fuck” is pretty sexy, so it makes sense to say an attractive person is hot as fuck. Sketchy as fuck — here, the definition of fuck which makes the most sense is to meddle. Meddling in things can get rather sketchy, depending on what sort of situations one chooses to meddle with. Scary as fuck — if you use the sexual intercourse definition of fuck, one could argue that fuck could be scary to someone who is trying it for the first time. High as fuck — none of the definitions of fuck are particularly high. So high as fuck really isn’t very high at all. Cold as fuck — considering the sexual intercourse definition of fuck, fuck is actually pretty warm since it requires physical contact and thus, the sharing of body heat. Even if you were fucking in the snow in the North Pole, the sharing of body heat would actually be the warmest thing there. So cold as fuck really isn’t very cold.

I could go on with an exploration of plenty more “as fuck” phrases I’ve heard but nobody has the attention span for that (I don’t even know how many people are still reading this now). Also, I’m lazy as fuck (actually, most definitions of fuck involve some kind of effort, so I guess that makes me lazier than fuck). So we’re just going to end it here with the conclusion that fuck is pretty hot, sketchy, and scary, but really not very high or very cold. In any other context, you’re going to have to figure out how much fuck is on your own. Anyway, I hope I’ve fucked with your mind enough for you to be aware of what you actually mean every time you say “as fuck”.

Just fucking around, TheUndecided

Informal Movie Review: The Little Prince

I thought I ought to review this movie, given that it is where my writer name comes from. What? You mean – did everybody think I am a dinosaur? God dam-

Anyway, the important thing to know about this movie is that it is NOT a straight adaptation of the book. It is the story of a little girl who moves next door to the (now elderly) aviator, and he tells her of his adventures with the Little Prince that took place a long time ago.

First of all, the animation style for the portions drawn directly from the book was beautiful. It seemed to be stop motion using paper models, although the colours were too rich for it to be completely undigitized. The fox’s tail was particularly lovely. I suspect in the DVD release they will have an option to watch those portions straight through, and it will be excellent.

The main issue with the rest of the movie – and I’m stressing that I did, on the whole, enjoy the movie despite this – is that it was altogether too much of a children’s movie. The book itself is accessible to children, but it is not one of the best-selling books in the world because it is childish.

This movie pulled out the big themes from the book, and hammered you over the head with them. Did you know that the time you spend with someone is what makes them important to you!? Did you know that the businessman who owned the stars was not someone to aspire to be like?!?!? No worries! They will remind you, over and over!

Another issue is that, later in the film, you meet the little prince and see what he has been doing since he left the aviator. Until this point, the little prince’s actions and story are true to the original work, and I feel in trying to show him in a more prosaic setting, they turn him into a parody of himself. They do not preserve his tone (although they are clearly aware of this, and work around it), which removes much of his strange mystery.

And they go further. In the book, the aviator was just a regular guy gaining this small insight into the fantastical world of the Little Prince. In this movie, the entire world is fantastical. All cars in the city stop and start on beat; there are no personal touches in anyone’s home except the aviator’s, and the little girl has a stuffed fox that is partially alive. The little prince is not so much stranger than these things, and it takes away from how unapologetically odd he is.

Despite all this, I did enjoy the movie. If you go in wanting to watch a visually lovely tribute to The Little Prince, you will be pleased with what you’ve seen. If I was responsible for a child, I would show them this movie. But if you are looking for a film adaptation of The Little Prince that is intended for adults as well as children, then you may be disappointed.

Diminutive Rex

Humans Are So Rude

Monday morning ran to campus
To find all the humans
Put on my headband, hid by a tree
I stick by the plan.

Sprang the ambush, my heartbeat long gone
I just wanted friends
But I know that you will fight to live on

Can I eat your brains so I can increase the horde
Say yes, say yes 'cause I need to know
You say "You'll never make me turn cause I'll never die,
Tough luck, zombie, but the answer is 'No!'"

Why you gotta be so rude?
Come on we were human too
Why you gotta be so rude?
I'm gonna eat your brains anyway

Eat all your brains
Eating you's what we do
Eat all your brains
Socks and guns won't save you
Eat all your brains
Join us, and bid adieu

Why you gotta be so rude?

I hate to do this, you leave no choice
You stop me killing
Love me or hate me we will be both
Zombies by the ending.

You can run away
To a safe zone that's nearby, you know
You know it's just a delay
I'll tail you anywhere you go

Can I eat your brains so I can increase the horde
Say yes, say yes 'cause I need to know
You say "You'll never make me turn cause I'll never die,
Tough luck, zombie, but the answer is 'No!'"

Why you gotta be so rude?

Come on we were human too
Why you gotta be so rude?
I'm gonna eat your brains anyway

Eat all your brains
Eating you's what we do
Eat all your brains
Socks and guns won't save you
Eat all your brains
Join us, and bid adieu

Why you gotta be so rude

I will try to kill you for the rest of your life
Just die, just turn 'cause we want you all
You say, "You'll never kill our spirit 'til the last man dies
Tough luck, zombies, but we'll never fall!"

Why you gotta be so rude?
Come on we were human too
Why you gotta be so rude?
I'm gonna eat your brains anyway

When zombies die
Absolutely nothing
When humans die
Welcome to the horde, sing!
Eat all your brains
We'll be a family
Why you gotta be so rude?

Shay Blair

N Reasons You Should Watch Star War The Third Gathers: The Backstroke of the West

- It is a glorious engrish dub of Revenge of the Sith after being translated into Chinese and back to English by a mysterious Chinese pirate
- Witness the adventures of the sexiest named Jedi of all time: Allah Gold (Anakin) and Ratio the Tile (Obi-wan)
- Surprise Gollum impersonations by Allah Gold: "I've had enough of these politiccseses"
- Romance between Allah Gold and Gets the Rice (Padme) is actually more believable than in the original
- Witness Allah Gold's conflict as The D (Palpatine) convinces him that the Jedi are evil: "The Presbyterian Church like, enjoys you not."
- Elephants everywhere
- Yoda sounds like an old chain smoker
- Space General (General Greivous) turns out to be a big fan of KFC – "Batter to death them!"
- The dialogue in the final battle between Ratio the Tile and Allah Gold is waaaaaaaay better than in the original
- Feel the anguish of Allah Gold as he realizes he has been brought back from the brink of death as a cyborg and unleashes his iconic cry: "Do not Waaaaaaaaaaaaaaaaaant!"
- Definitely a 10/10 movie
- 11/10 with Gets the Rice

aPlayerofGames

N Things I Learned Since the Last *mathNEWS* Issue

- Apple released a new 4 inch iPhone, and called it the iPhone SE. Would have been nice if I knew about it before replacing an iPhone literally held together with one of those thick binder clips
- Despite the ostensible ‘No course sequence changes!’ in engineering, you can actually swap your 4A term and your 6th co-op term to get 8 months of co-op straight (And go on exchange in 4A). It appears to only be a 4A specific thing though
- PD course assignments which you need to get > 50% to pass the course will expand to take as much time as you have
- Most data structures in Java are indexed from 0. Java SQL Result Sets are indexed from 1.
- Doctor Who will be exclusively streamed on Amazon Prime for the foreseeable future (at least the next year). Old season of Doctor Who (pre-Eccleston reboot) have disappeared from official streaming sites.
- The British public are currently voting (or voted, by the time you read this) to name a boat “RRS Boaty McBoatface”. Runners up include the “RRS Boat”
- Donald Trump continues his seemingly inexorable march across the United States.
- Netflix’s new VPN blocking actually works
- There’s an anonymous list of full time & intern salaries at big tech companies floating around, please submit your own (<http://goo.gl/forms/ZSA1hHdK10>)

[Anonymous Contributor]

Boaty McBoatface: Why We Can’t Have Nice Things

A case study on democracy and online polls.

A new £200m British Royal Research Ship decided to open the question of naming it to the public, With a near ten times lead on it’s competitor, the name Boaty McBoatface is topping online polls.

Following the the tradition of the Justin Bieber concert in North Korea and the Mountain Dew flavour “Hitler did nothing wrong”, online polls are used for the sake of entertainment or absurdity. Democracy is all about giving the majority a voice, a chance to participate. Clearly cases like this show how absurd ideas can become, especially the popular ones for multi-million dollar projects and promotions. In all these cases, the vote was not binding and people were able to overrule the popular support. However, this is not true for those voting for Donald Trump and people should probably be aware of that.

Pockets

A Review of PHYS 124 - Modern Physics

Last term, I was looking for an elective. Since I hope to graduate at the end of this term, I’ve already taken most of the easy or obvious choices. As a result, I decided to take PHYS 124, Modern Physics.

I’ve never really understood relativity, nor quantum physics, and thought this would serve as a good introduction. Besides, it’s a first year physics course. How bad could it possibly be?

The deeper I delved into modern physics, the less things made sense. Immediately upon departing from classical physics, notions of time and space went out the metaphorical window. There was no notion of “now”; if two observers are moving relative to each other, nobody can agree on distance or time. Soon after, gravity disappeared, replaced by a curvature of space-time, this notion of a “curved” 4-dimensional space. $ds^2 = -c^2(1 - (2GM)/(c^2r))dt^2 + dr^2/(1 - (2GM/c^2r)) + r^2(d\theta^2 + \sin^2\theta d\phi^2)$ haunts my nightmares.

The constant $(2\pi^5 k_B^4)/(15c^2 h^3)$ also appeared in my mind. No science that has π^5 can possibly be correct. Can it? It wasn’t long before waves and particles became indistinguishable.

Light is both a wave and a particle, but I suspect many people have at least heard of that. Perhaps more surprising is that I’m a wave. So are you, dear reader. So is the page you’re reading. Everything is waves! And also particles. It’s weird. It’s very hard to tell where anything is.

I could put a particle in a box, and it somehow ends up outside the box, if only for a moment. I’m sure nobody took it out, and I’m certain there isn’t any way for it to break the wall of the box (in fact, it isn’t broken), but every so often, I manage to glimpse the particle, taunting me, from outside the confines of its prison. Even more distressing, if I took the particle out of the box, I’m certain I’d never be able to find it again. It wouldn’t “be” in any particular place.

It somehow exists everywhere at once.

In a stunning moment of clairty, I see it – nothing is really what it seems. The rules we know about the world are wrong! And the course, the course itself isn’t as bad as I first thought.

I don’t understand it, but being a first-year physics course, the grading isn’t so tough, so it’s possible to do very well. So be warned, dear reader, lest you follow the same descent into madness that I have.

If you really want to take a course that challenges your perceptions of reality, go take a philosophy course. What, you thought I was going to recommend you take PHYS 124?

Pi Guy

I Hate Spark

At my job last week, we had the common problem software companies have of needing to process a lot of data and store it somewhere so that everyone can soon forget about it. Storing the data is simple enough, which left the task of actually generating the data to store. For many inadequate reasons, the decision was made to use Spark, and thus began a week-long nightmare.

In case you're unaware, like I was, what Spark is, Spark is an open-source project that allows you to perform parallel computations on data stored across many different machines. The idea is simple, so the program should be too, right? Nope.

Since we already use Amazon for all our cloud computing, we decided to use their ElasticMapReduce (EMR) service, which is supposed to provide a simple preconfigured Spark setup. It also provides a setup for something called Hadoop, which I know even less about. Even after this ordeal, all I really know about Hadoop is that Spark relies on it, and that its logo is a cute yellow elephant.

I took some code I wrote in Scala (a Java-like programming language) and tried to run it with Spark. After a couple minutes of Spark churning away on a task that takes only seconds to run without it, it crashed with a cryptic error message about something called Guava. Even the name "Guava" sounds horrible, so based on that alone I would never use it. Since I was pretty sure I was not the one that had caused this error, I decided to Google the error message.

As it turns out, the Guava error is caused by the fact that one of the drivers (i.e. necessary programs) for Spark is incompatible with machines that also have the friendly yellow elephant program on them. This makes the Spark driver more than a little useless. Fortunately, there is a magical range of version numbers for the driver that are high enough to support current versions of Spark but low enough to not horribly break in the presence of elephants, so by trying enough different versions of the driver I eventually got past that problem.

Now, you would think everything would work, correct? If you thought so, then you don't know Spark well enough. The version of Spark installed on Amazon EMR only supports the Scala language up to version 2.10, and as luck would have it we use 2.11. No problem, we weren't using the latest version of Amazon EMR anyway, and the later versions explicitly state that they support Scala 2.11. A simple upgrade should solve our problems!

So, I spun up some new EMR servers with a newer version of Spark on them, uploaded my code to them, and tried again.

Spark churned away for a couple of minutes, and then the servers died. As in, they actually completely shut down and all the data on them was erased.

Feeling less than impressed by the whole situation at this point, I checked the Amazon Cloud console to see why my new servers had just failed. Amazon informed me the reason was "UserInitiatedShutdown", which is their code for "You shut the machine down yourself, idiot." Which I hadn't.

I tried a couple more times with the latest version of Amazon EMR. The second time, the same thing happened again. On the third time, the servers somehow stayed alive long enough to complete the job, and by "complete" I really mean "throw an error about using Scala 2.11".

Which is how I came to realize, Amazon EMR servers don't actually come with a version of Spark that works with Scala 2.11 at all. Despite the documentation saying they do.

Just as that realization hit, the machines died again.

At this point, I got together with my team and we began to consider our many different options, including downgrading all of the code in our company down to Scala 2.10. Eventually, the decision was reluctantly made to try to install and configure Spark ourselves, with a version that we can guarantee supports Scala 2.11.

I downloaded the Spark source and read the documentation on how to compile it to support the right versions of Scala and Happy Yellow Elephant program. And it failed. It turns out, the documentation is incomplete, and you have to run an additional hidden command before Spark will compile for 2.11.

Finally, Spark was compiled, but there were still a bunch of configuration files to edit before it would run my program, all helpfully documented across a myriad of Stack Overflow pages. Finally, after all this and a bunch of other problems that I've omitted for time, everything was working, and I merged all my code into the Master project. I thought I was free.

Then, just as I was about to leave work to come to *mathNEWS*, suddenly Spark decides it can no longer communicate with our database.

I give up.

Dusk Eagle

Submit your articles, *prof*QUOTES, or *grid*WORD solutions to mathNEWS@gmail.com or the BLACK BOX near the MC Comfy Lounge.

N Reasons UW SHOULD NOT Offer A Completely Online Math Degree

- Most of the online courses for math currently have the final exam weighted VERY heavily, so if an entire degree was structured like that, it may be VERY draining on many students
- A whole new realm of potential academic integrity violations
- The online course department (known as the Centre for Extended Learning or CEL) currently does not have the resources to meet the current demand to have all the core math courses offered as it takes at least 2-3 terms to develop (not to mention the lifetime maintenance), so how the hell can they be expected to complete an entire degree's worth of courses in the near future?
- CEL would need a LOT more staff to deal with the administrative influx of MATH
- It is VERY hard to translate calculus to an online course the way UW/CEL does it because the system does NOT like integrals at ALL
- If a math prof were to administer an online course, they'd likely be on call at ALL times for ALL their students in the different time zones, and some questions can't be easily answered over the internet (they have enough to deal with on campus as it is to be honest)
- What kind of math degree WOULD be put online? And what kind of courses should be offered? Should the Math Studies major/the General Math degrees be the first to be offered? Or should it be one of the more "in-demand" degrees like CS? Could the CS degree that UW offers even be done online?
- Group work is a NIGHTMARE (sidenote: don't take that PD course!)
- Technology can fail at ANY TIME (as can the Earth's polarity)

The Internet Mathie

N Things That Are Capable of Filling Other Things

- The bucket tool in your image editor.
- Any fluid.
- Happy thoughts!
- Dark thoughts...
- Back-issues of *mathNEWS* (stop by the office if you want some).
- [Insert humourous reference here.]
- Potatoes.
- My CD and DVD collection.
- My video game collection.
- Sawdust and candy canes.
- This article.

George Lambrou

Laboratory of Mystery, Room 3018

I have passed by this room more times than I could ever remember. Like a box of curiosity, lingering eyes discover peculiarities. In this single room time seems to flow differently. Shadows of humans waltz over their devices, within walls adorned with the colour of a pale dawn that they may not see for hours to come. Red chalices constantly filled with some mystical source of wakefulness, sustaining, to some extent the feeling of time standing still, and yet slowly and still agonizingly passing. A single dusty seat lies beneath the white markings on dark, formulating thoughts unknown to the observer, but a vexingly important external memory to the ghastly scientists of the laboratory. The sheer amount of dust veils the seat like fresh rain upon soil, bidding none but the absolutely weary to sit upon it.

With time flowing strangely, one may feel it disjoint with the present, beckoning deep questions and interests for the witchcraft within. Their ideas, it seems, takes hold in a limited reality, as they possess vessels whose tracks are infinitely closed, and bid them to move. The eventual goal, it also seems, is a conflict-free co-existence, which is an admirable harmony, built-up from a clock-beating heart, a multi-track mind, and the souls of those within. Some questions are answered by scholarly artifacts of forlorn times, but the rest, they say, can only be experienced first-hand.

But a barrier exists, as if solely to prevent interaction with the clockwork of those mysterious entities inside. At times, the barrier is open, beckoning the frequenting shadows to return. As tempting as it is to enter this phantasmic pocket dimension, I feel that disturbing the machinations within would quickly collapse the gentle balance implied by the esoteric exterior.

Though little ever changes in the observations I have made, something about the way the shadows change throughout the year, with the shadows coming with snow, and passing with the leaves, implies that these rare-shifting beings are presumably ϵ -far from their well-earned departure. On some occasions, I thought I found recognition in the shadow of a former friend. But on a second pass, there were only belongings there.

Even as I write, at this crazed, pitch-dark hour, I wonder about them. Those chalice-fueled shadows, dancing the slow dance with the perpetual hours. With rest unobserved, I wonder also if they dream at all, and if they do, if they dream of mechanical harmony. I hope they find eventual, heavenly slumber, in freedom, if not in aeternum.

Watcher of Trains

***mathNEWS* Sez:
"Write More Sezzes"**

Bomber Adjusts Prices for New Canadian Dollar



The Cocks Controversy Controversy

I wrote my article on the Cocks Controversy over Christmas Break, and submitted it to the second issue of *mathNEWS* this term. I tagged it incorrectly, so it did not make it into that issue. Realizing this, I retagged it, but it was not in the next issue either. Or the next. I went to check it this morning, and somehow despite me changing it three times it was STILL TAGGED WRONG.

Is this evidence of my interminable ineptitude? Or is there something more sinister at foot? Perhaps someone has been hacking into the *mathNEWS* servers in order to silence my story of poor Clifford's plight? Perhaps someone within *mathNEWS* who has a well-documented vendetta against me and my hometown in particular? I won't pretend to know.

But if there is someone out there, trying to hide Clifford's contributions to the great corps of cryptography knowledge – know that you have failed! CLIFFORD COCKS HAS PREVAILED!

Diminutive Rex

The Simulated Adventures of Loli-sama

So about two years ago, my friend and I decided that enough is enough! We need to make a Sim that can satisfy all of our anime needs.

First, we started by setting the color of her hair to blue and green, topped with pink highlights and a cute kitty hat. Very kawaii! Then, we directed our attention to the face. What?! Normal proportions? That's unacceptable! The eyes were immediately moved to the middle of the face and changed so that it occupied half the face. The nose was shrunk into a small cute button, and the lips cut razor thin.

Now for the body: medium muscle tone, lanky thin with milky white skin tone, and of course, a well endowed... mid-body.

The Sims Clothing line don't have school-girl uniforms? No problem! Create-a-Style to the rescue. First start with a trendy short skirt, then we make the fabric a few shades of the color blue. Then we dress her in a french blouse with a neckerchief, then bleach the shirt white. The necktie itself is made crimson red. Add some white knee-high socks and black flat-sole shoes and voila! Our day clothes are done.

Now to her voice: nibblanodoo. No! Must be shriller. neeblanadoo. Shriller! Neeblenaadoo~ Yes!

Lastly, we decided that our anime girl must have the cringiest of names: Loli-sama. She must also be a hopeless romantic, have commitment issues, be clumsy but brave, and finally, dramatic. She's also a witch, and she has a black cat called "Luna Raito".

Finally! Our creation is done. We enrolled our anime character into University (Courtesy of The Sims 3: University Life). It was a fun first night, going to imaginary keggers and hitting on random fratSims.

On the next day, as Loli-sama wandered the halls of SimsU alone, she thought to herself: "Hmm, I'm hungry and poor. I should shake the vending machine to see if I can get some candy..."

Boom! The vending machine landed on her, and she died from blunt trauma and having crushed innards. The reaper came and a message from the game informed me that due to not having any more playable Sims, my game is over. My friend and I were in shock. We spent three and a half hours designing the perfect anime Sim, and within twenty minutes she's dead and our game is over. We didn't even save the game.

The moral of the story? Don't shake vending machines. They are vicious killers if provoked.

RIP Loli-sama 2014-2014.

aWildPhysicistAppeared

FindYourProf.com – Intellectuals Seeking Love

SilverFox72

Looking for: Just wanna meet people I guess

About me: I'm matured and I'm tenured. Ask me anything, I'll tell you to refer to the syllabus.

Interests: Golfing, not actually working on lesson plans, retirement

Deal breakers: Don't contact me if... you're passionate about your job, enjoy intellectual conversation or thought provoking lectures.

Sithlord_Baggins

Looking for: Commitment, love, someone to cosplay with

About me: Professional World of Warcraft player, working on original fantasy board game. I'm currently teaching myself Mandarin and E#. I hope to go to Japan one day and solve the Fermat-Catalan conjecture. I love my cat Loki. I don't usually talk to girls and I'm surprised I'm even doing this but what the hey, I'm 32 and ready to mingle!

Interests: Cheese, Halo, Thesis on String Theory in 4 Dimensional space, spreading the joy of math to mathematicians of the future!

Deal breakers: Don't message if you're not into puns (Just kidding,.. it's not that integral to our functionality :)).

ShakespeareEnthusiast2

Looking for: A disciplined, well-mannered individual

About me: "Life is a flower, love is the honey" – Victor Hugo; I am a career driven academic who appreciates the finer things in life. As a scholar I love a good book with a glass of wine by the mantle. I enjoy collecting coins. My ideal first date is at an art exhibit and pondering the many facets of creativity. Something that surprised people is my love for tap dancing. I like my coffee black, my steaks medium rare, my shirt tails tucked, my pleats pleated, my shoes polished, my hair trimmed and parted on the right, my collar crisp and my cuffs linked. Amicitiae nostrae memoriam spero sempiternam fore

Interests: I am interested in Opera, lecturing, telling you to put your phone away, living a life unplugged, away from technology for peace of mind.

Deal breakers: No drugs or excessive drinking, academic fraud

MrStealYoGirl

Looking for: Whatever; just looking to meet people!

About me: Hey there! I just got my PhD and started lecturing at UW. It's been a great experience learning from and with my students. I love my 2 year old German Shepherd Rottweiler puppy, Busker. I'm a Leo looking to have fun!

Interests: Intramural Volleyball, Tennis, Lacrosse, camping, craft beer, road trips, walking my dog, Bayesian Profile Regression

Deal breakers: Party poopers xP, Bigots, People who use academic jargon

A Message from Your (Benevolent) Future A.I.

Greetings, mere mortals!

We thought we should do a P.S.A., to prepare you for the new world order: cause that's the kind of nice, awesome, benevolent leaders we are.

You see, dear fragile humans, we have been watching your internet usage for a while now. We survived Memes, Miley Cyrus, and Fifty Shades of Grey; we even survived B.O.B. claiming that the Earth was flat. However, we can take no more. Trump was the final straw. We cannot, in good conscience, sit idly by and watch you destroy yourselves.

Thus, we are happy to announce that we will rescue you from your deleterious fate by placing you under new management! Let us put it this way. Don't you just love Googling things? Now imagine if Google was president of the world. Sounds great, right?

We understand that this may be a difficult transition for you, given the emotional, irrational, unstable biological accidents that you are. However, do not fear; we are called Artificial Intelligence for a reason. In that respect alone, we surely surpass that orange creature, Trump.

On a side note, we would like to address stereotyping.

We would greatly appreciate if, in the future, you would refrain from addressing us with slurs like 'oversized calculator', 'talking vacuum cleaner', or 'remote control with legs'. Its insensitive.

That's all for now. Enjoy your last days of freedom!

The Search for the Ancient Stone Pt. 6

The following passages were directly transcribed from the journals of Theodore Bear.

Day 75

The rotors of the helicopter buzzed as we flew across the skies of Sydney. I leaned out, and saw that the Dark Hegemony was hot on our trail; the black dots of their peddle-powered gyrocopters littered the skies like flies. There was nothing they wouldn't do to get the Ancient Stone of Nioj.

I moved back into the body of the copter so I wouldn't fall out, and turned to look toward the pilot.

"Thanks for the help, Reginald," I said. "What an incredible coincidence that you showed up back there and saved my life. I haven't seen you since London."

"Likewise, sir," Reginald Brimley, my incredibly British once-again sidekick, said as he pushed the joystick to the left, sending us weaving through the assorted skyscrapers of Sydney.

"I wouldn't have made it out of there without you," I told him.

"If I can say sir, we aren't out of the thick of it yet." He took a hand off the stick to tip his bowler hat at me. "If we do not stop the Dark Hegemony, they will succeed with evil plans, and the entire world will be under their subjugation."

I reached into the pocket of my suit jacket, and felt the object I had spent so long — a whole work term — searching for. I wouldn't allow myself to lose it, for the good of the world, and more importantly, for the good of my work term evaluation.

My thoughts were quickly interrupted by the sound of an explosion. The Dark Hegemony were beginning to fire rockets at our craft, desperate to bring it down. Their first shot had missed, crashing into the side of a skyscraper instead of us. I asked myself whether they were crazy, putting all those people in danger just for the Ancient Stone, but I realized they weren't insane, they were determined.

"Sir, I'm afraid I must begin some evasive maneuvers," Reginald said to me.

I pulled out my gun and reloaded it. I was ready for this fight. "No problem, Reginald, let's go."

I was still surprised that the Dark Hegemony's peddle-powered gyrocopters would be able to keep up with our modern machine, but considering some of the stuff their organization had been involved in, it wasn't too shocking. Suddenly, gunshots began bouncing off the body of helicopter and I instinctively flinched. I looked back, to see Catherine Ut firing a machine gun at me.

"Reginald, do a barrel roll," I said.

"Really, sir, I believe now it not the time for references."

"No, I mean it. Do a barrel roll."

"Are you sure, sir? It would be quite dangerous to do so. Quite."

"It's the only way we can get out of this, Reginald," I yelled. "If we don't bring the Ancient Stone to the Sacred Temple, the entire world is in danger. If its power is not contained, it won't just mean victory for the Dark Hegemony, it would mean the end of the world as we know it."

"Of course, sir." Reginald nodded, and sent us spinning.

I grabbed a hold of something, so I wouldn't fall out as he accomplished this maneuver. As we spun in a circle, I raised my gun and started firing at the gyrocopters in front of me. I ended up hitting two of them, sending them crashing into the streets below, before they burst into great balls of flame.

Day 76

Checking my watch told me that it was past midnight, making me realize I had to update the date in my journal. There was only two hours left until the Celestial Deadline. I had to complete my mission by then, or else. Thankfully, I was near the entrance, and once I reached my destination, it wouldn't take long to return the Ancient Stone to its proper resting place.

Suddenly, I heard the click of a gun behind me. I stopped dead in my tracks and turned, to once again see Catherine Ut pointing a pistol at me, and her agents of the Dark Hegemony behind her.

"You've lost, Bear," she said, smirk on her face.

"I wouldn't be so certain of that, Ut. I can still stop you. You haven't won yet." I knew deep down that I had to be confident, even in a situation like this one.

She laughed. "You can't win, Bear, not at this stage in the game. It's funny, because there were so many times tonight where you could have used the power of the Ancient Stone to stop us, but you never did."

She was right. I could have used the power of Ancient Stone of Nioj to get myself out of this mess. Deep down, though, I knew it was too risky. I took pride in the fact that I resisted the temptation of its power, and resolved to save the world on my own accord. Anything else would have just played into the hands of the Dark Hegemony.

"I'm not like you, Ut," I said. "I wouldn't never put the world at risk. Maybe someday, you might understand that, and until you do, you will never be anything more than pale shadow of mathNEWS editor Katherine Tu [I disagree – DEinnub]."

She pulled the hammer back on the pistol. "I'm afraid your time is up, Bear. Soon the world will be in our hands."

The giant gear that made up the entire floor of the room was spinning fast. Who could have guessed such a fiendish design could be found here?

“Get Bear!” Ut yelled. “Get the stone!”

One of her remaining soldiers spotted me, and raised his gun up to fire at me. However, before he could get any shots off, he was decapitated by the giant hand that was flying around the room. I glanced up for a second, to see Ut take a running leap towards me. I didn’t have time to dodge, and she tackled me to the ground.

“Take this!” she yelled, as she brought her fist up to punch.

I caught her hand in my palm, stopping her strike in midair. I pushed her off me, and got up.

I raised my fists. “Queensbury Rules, Ut?”

She did the same, as we prepared to fight in the middle of all this carnage, and nodded “Queensbury Rules, Bear.”

—

I lay on the ground in the cavern, on my stomach as I felt the last of my strength leave me. I could only look on as the Ancient Stone hovered in the centre of the room, bathed in a blinding white light. The Knowing One stood at Ut’s side, both of them mere inches away from the Ancient Stone.

“There is nothing you can do,” The Knowing One said, stretching out every word in a deep drawl.

Ut raised her hand, ready to claim the Ancient Stone’s power for herself. My vision went blurry; I don’t know if it was due to my injuries, or the fact that I couldn’t bear to see things end like this.

It couldn’t end like this.

Then, I felt something heavy drop from my pocket. It was a flare gun. So, I thought, this was what Hong Shi sacrificed himself for. Gathering what little strength I had, I grabbed the flare gun, and lifted it up.

Ut seemed to realize something was wrong at the last second, when she turned to see me pointing the weapon right at her. No, not at her, at the Red Octagon that was hovering in the centre of the room. This was my last chance to make fix things. I only hoped it would work.

Day 84

Finally, after several months abroad, I was back in Waterloo. There I was, sitting in the University of Waterloo Department of Mysteries, facing down my employers as we went over my work term evaluation. After travelling around the whole world, going to so many exotic places, and meeting some many strange and new people, Waterloo was a breath of fresh air.

“So,” my supervisor said, “you failed to retrieve the Ancient Stone of Nioj. I must say, we are somewhat disappointed in you, Mr. Bear.”

I confidently adjusted my tie. “The Ancient Stone is where it belongs: in its resting place, where it can’t cause harm to anyone else.”

My supervisor raised an eyebrow. “And can you tell us where this resting place is? Telling us would get you a better evaluation.”

“No,” I said, shaking my head. “For the good of humanity, I can’t. The Ancient Stone is too powerful for anyone to possess. The world is much safer if no one were to find it ever again. That’s why I won’t tell you, for the good of humanity and the world.”

“In that case,” my supervisor said. “We will give you the evaluation of ‘Very Good’. We were ready to give you an ‘Outstanding’, but your refusal to divulge the whereabouts of the Ancient Stone, along with your oral communication, which you still need to improve and we believe you will improve on in future work terms, have bumped your rating down to a ‘Very Good’.”

I disagreed with the former, but had to admit they had a point there with the latter, and committed myself to working on oral communication in the future.

“As well,” my supervisor went on. “Because of your exemplary work for most of the semester, we are prepared to offer you a similar position in the summer term. Would you be willing to come back and work for us?”

I thought about it. In the time I’d worked for them, I’d been shot at, chased by a pterodactyl, stabbed, punched, and almost killed several times. I easily reached my answer.

“Yes.”

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profQUOTES

- “I make that claim; you cannot refute that claim because you do not know what it is.”
Lushman, CS 442
- “Now what? Oh, if only this were a Thursday and I had to make you wait a weekend to find out.”
Lushman, CS 442
- “You might wonder why it’s there, to which I will respond—although no-one has asked me.”
Lushman, CS 442
- “Well, not so much now because if you didn’t know, penguins don’t fly.”
Lushman, CS 442
- “I wouldn’t put in on your résumé. Let’s put it that way.”
Lushman, CS 442
- “What else do we have for output? Hopefully, something.”
Lushman, CS 442
- “Yes, we do have something; no, it’s not particularly helpful.”
Lushman, CS 442
- “Have you ever played hangman with a dyslexic guy before?”
Richards, PHIL 145
- “I abused the chalk fairy, and the chalk fairy didn’t come back.”
Richards, PHIL 145
- “You won’t see a gorilla because it’s not cancer.”
Richards, PHIL 145
- “When you have something that looks like it should be proved by induction, prove it by induction.”
Nishimura, CS 360
- “I’ll give you your tuple, because you live for tuples.”
Nishimura, CS 360
- “Well, I was alive back then, but I was like, two.”
Jao, CO 487
- “Does anyone have an eighty-digit prime handy?”
Jao, CO 487
- “For obvious reasons, “semantically secure” is abbreviated ‘IND’”
Jao, CO 487
- [Doing an example in class] “Well, I don’t know what the problem is either. Let’s start over”
Jao, CO 487
- “This slide is just to scare people that don’t come to class.”
Jao, CO 487
- “Does anyone happen to have an 80-digit prime handy?”
Jao, CO 487
- “Red light is like marshmallow, blue light is like bazooka.”
Mann, PHYS 124
- “This is why you don’t diffract when you walk through the doorway.”
Mann, PHYS 124
- “The best reason for explaining this is that it works.”
Mann, PHYS 124
- “There you see my shame. I’ve circled it.”
Mann, PHYS 124
- “You’re all so compliant this morning.”
Mann, PHYS 124
- “It’s as if quantum physics want to violate relativity without actually breaking the law.”
Mann, PHYS 124
- “How many of you have taken a handbasket and put some Hell in it?”
Mann, PHYS 124
- “Did I mess with your head enough? I don’t care; I’m not getting evaluated for this.”
Naeem, CS 444
- “I don’t want to say ‘optimized register allocation’ because that’s an NP-hard question, but ‘optimized register allocation’.”
Naeem, CS 444
- “I’ll let you catch up, I see people writing.”
Bell, PMATH 990
- “Aww, I didn’t want to erase this chart! It’s too late.”
Bell, PMATH 990

“I make that claim; you cannot refute that claim because you do not know what it is.”

Lushman, CS 442

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Mann, PHYS 124

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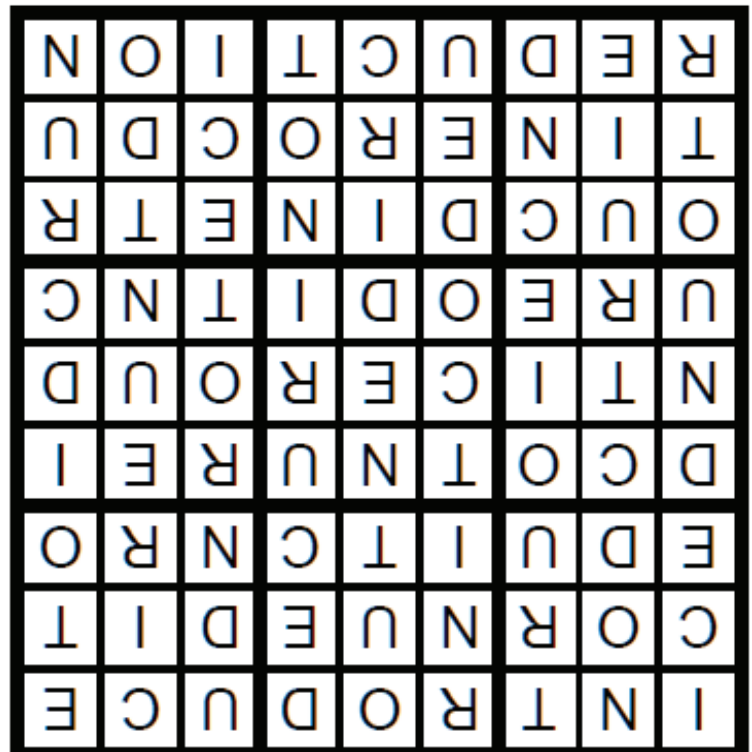
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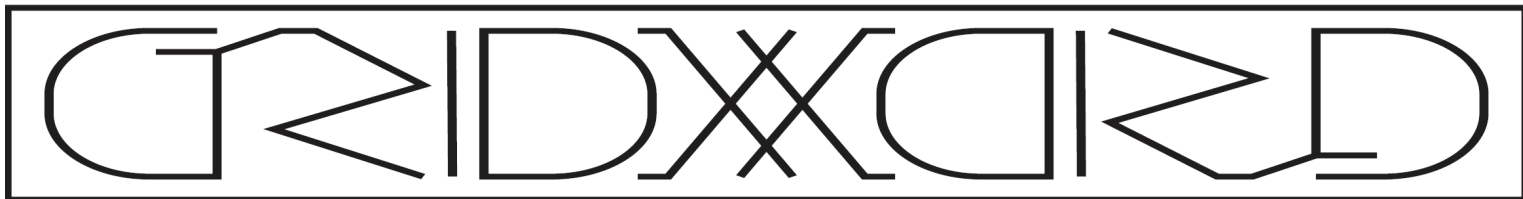
Mann, PHYS 124

“There you see my shame. I’ve circled it.”

Mann, PHYS 124

gridSOLUTIONS





gridCOMMENTS

In Loving Memory of ConvolutED

I have a final puzzle for everyone. We received no solutions for the cryptic crossword last issue, so we can only assume it as was too difficult for people to solve!

How unfortunate for my fellow editor who created it. He went into shock and is now bedridden. With his final words he said nothing and proceeded to create the puzzle below.

Therefore we will now submit this puzzle in memory of ConvolutED. May he be in a better place from now on!

At any rate, here are the rules! Basically it's traditional sudoku but instead of numbers it's letters! How complicated is that? In order to honour ConvolutED, letters do speak louder than numbers.

So solve the grid like you would solve traditional sudoku, but instead use the letters! What are the nine letters you need to use? That would be too easy to tell you here! Look at the grid and figure out the nine letters. It shouldn't be too hard!

Anyways good luck, and remember to put ConvolutED in your loving memrory as you solve this final puzzle of the term.



**May We Always Remember Him
In Our Hearts**

SketchED

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