

# math

# NEWS

Volume 86, Issue 6

Friday, July 27, 2001



“Maybe you guys aren’t ready for this, but you’re gonna love it!”

-Petey McFlizak



## Challenge Results

It's true, I'm actually following through on a promise. Four fellows emailed some suggestions for math test book titles that would be better than the dregs from the Globe and Mail earlier this month. All four will be rewarded moderately for contributing, except Pete, I 'reward' him enough as is. So, here are some of the best:

### Jason Lau's Submissions:

- Group Theory for Single People
- Graph Theory with Applications in Dating
- Men are from the y-axis, Women are from the x-axis
- Shortest Path Problems for Drunks
- Introduction to the Theory of *The Matrix*
- Java for Starbucks Lovers
- Chicken Soup for Real-Time Programmers' Soul
- Maple 6 for Gardeners
- Applied Probability for Gamblers

### Pete's Submissions:

- Calculust, a Story of Love, Deceit, and Derivatives
- Why 2 Doesn't Go Into 5
- Non-conformal Positions

### Matthew 1801's Submissions:

- *mathNEWS* — (what could be more interesting and appealing than that title!) [*My only worry would be that most people would only read the profQUOTES* — TaxiEd]
- The Morality of Improper Integration
- Mathematical Modeling of Human Bodies in Action
- How to make your Lover Scream the Big O!
- How to Apply the Squeeze Theorem when you have 2 Men and a Woman

### Matthew Bell's Submissions:

- Fields of Dreams: the Promise of Elliptic Curve Cryptography
- 69 101: a Pocketbook for RSA
- Hairy Conic Sections
- Leonard Nimoy's Proof (PMATH 330 text)
- Turing's Unceasing Problem
- Artificial Intelligence for Dummies
- Gambling and the Monte Carlo Trials
- The Network: a Guide to Night Life at UW
- Concurrent (Programming) Pick-up Lines

Thanks for the titles,  
Bradley Trixster Smith

## No Execs in the Sex Office

- MathSoc fee: \$10.50
- Photo Copying Notes: \$2.25
- Freezies: \$1.00 down payment
- Table to stand on: \$25.00 at surplus sale
- Watching two squirrels going at it in the window: Priceless!

For all your beastiality need there always the MathSoc office.

## Honourary Lifetime Member

Every term the math society considers worthy candidates to be given lifetime membership in the society. The candidate must be finishing their studies at the University of Waterloo and have been involved in both Math and Cross-Campus events throughout their career at UW and have contributed to increasing the quality of student life at Waterloo.

This term MathSoc is proud to honour Nadia V. Ursacki with an Honourary Lifetime Membership Award. Nadia is completing her Computer Science degree this term and will then be leaving us for bigger (but you can't get better than Waterloo) things. Throughout her time at UW she has been (among a very, very long list) an executive of MathSoc, a member of math orientation, most notably the overall controller of last year's extremely well run Math Frosh Week, an avid member of FASS and an all-round very busy person. [*And a irregular mathNEWS contributor!* — TaxiEd]

Congratulations Nadia and good luck in the future.

Colin Davidson

## Letter to the editors?

ok man you are so fucking right sex is like air ... and also the one about the dog if you can't eat it fuck then piss in it and gravity is an unforgiving mother fucker!!!! man you rock put some more stuff on and don't put dump shit put the sex stuff!!!!!!!

Austyne

## lookAHEAD

### mathNEWS

July 27	Issue #6 leaps into cracks of time
August 6	Issue #7 Production Night Come if you want, no one will show up.

### Math Faculty

July 27	Lectures End (Woo-hoo!)
July 30	Exams Begin (D'oh!)
August 11	Exams End (Finally)

### MathSoc

August 5	EOT Party
Anytime	On-Line Exam Bank open for business

### MGC

August 1	Intent to Graduate due for Fall Convocation
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### Co-op

August 27	Recommended Work Term starting date Get to work, you slacker!
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### Miscellaneous

July 29	Copa America Final
August 6	Simcoe Day/Civic Holiday
August 11	A busy day in Edmonton
August 13	Garfield's least favourite day (Monday the 13th)
August 22	Another dog day of summer
September 1	Raymond Lai returns to campus and still hasn't figured out what his nickname will be
September 3	Labour Day It's time to work (it)

## Subscriptions!

*It'll get better in the Fall*

Going to be off campus or out of the area next term? Wondering how to occupy your time during those boring early morning meetings? Wonder no longer! For a nominal fee you can subscribe to *mathNEWS* for next term — or any term, come to think of it. And then you'll get a copy of *mathNEWS* delivered to your door by snail mail about every two weeks. Sure, you might be thinking now, "Oh, I can just read it on the web," but really, all that pointing and clicking, it's not the same is it? Anyway, we like to stick bonus stuff in the issues — just think of the filler you're missing! Plus, *mathNEWS* is more portable than your computer. I'd like to see you read an issue online while piloting a CF-18. All it takes is a little money to pay for postage (and your address — not money to pay for your address, just tell us your address so we can mail it to you ... geez, stop being so literal). But it's still a pretty good deal, have a look at the rates:

	Canada	U.S.	Overseas
One term	\$7.50	\$10	\$15
Three terms	\$20.00	\$25	\$35

This is the cost of about 6 exciting issues of *mathNEWS*. All prices are in Canadian funds. And if we happen to publish more than 6 issues, then you get them absolutely free! (Only the bonus ones are free, we're not compensating for having too many issues ... geez, you're doing it again) So with the three terms you can get a full year's subscription, or break it up over a longer period of time. So, if you are going to be out of town this Fall, next Spring, and the following Winter, we can handle that! If that doesn't make sense, come by the *mathNEWS* office to subscribe some time and we'll explain it to you! If you're far, then e-mail [mathnews@student.math.uwaterloo.ca](mailto:mathnews@student.math.uwaterloo.ca). Subscription forms (along with cash or cheque made out to *mathNEWS*) can be dropped off at the *mathNEWS* office (MC 3041) whenever someone is around, slipped under the door, left in our mail box in the MathSoc Office (MC 3038), dropped in the BLACK BOX, or you can hunt us down any way that you want (preferably if we want it too) and give us money for your subscription. If you are mailing us a subscription form, please send it to the address listed in the ISSN along with your cheque. (F = Fall; W = Winter; S = Spring).

We promise that addresses will only be used for good (sending *mathNEWS*) and not for evil (sending snail-mail viruses).

Taxi!

### mathNEWS Subscription Form

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Canada: \$7.50/term, \$20/year  
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## Student Applaud Larger Classes

In a public address on the steps of MC the Special Math Undergraduate Commission announced that class sizes would be increased in the upcoming year. "We're really excited about the brave new changes taking place in the fall," said Wendy Smefner, spokesperson for SMUC. "Our students have had to deal with unreasonably small class sizes for far too long and it's time that we set things strait."

Citing the Waterloo's recent difficulties in finding competent professors to teach the growing number of students in computer science and other 'hot' areas, Smefner said, "Why should we have a lot of average profs, each teaching a few students, when we can have a few really good ones teaching more? We're wasting valuable human resources teaching in the MC, only capable of housing 120 students per room when we could be holding lectures in much larger venues. In fact, while the weather is still good, why not host open air lectures in the Columbia Lake area? We feel that this sort of free and creative approach is exactly what Waterloo needs to refuel its creative juices."

Students were equally impressed with the idea. "I'm tired of having profs who don't know what they're doing. Are we so selfish that we're going to foist [definition of foist: "to force another to accept especially by stealth or deceit" — Pete Love] lousy profs on our fellow students because we don't like to sit in a crowded room? Come on." said 4<sup>th</sup> year undergrad Pedro Dominguez. "Sure there will still be classes with low levels of interest, like 4<sup>th</sup> year CS courses where the class numbers will have to remain small, but all the math and early stuff should be done in one section per class. Are you really going to tell me that it's necessary to have more than ten sections of first year calculus, some of them even having lectures next door to one another at the same time?"

Dominguez' words were echoed by a number of like-minded students. Kristina Rhoselophera, an applied math, fine arts double major was quoted to say, "In art, we need one on one attention from the prof so that we can learn to develop our techniques in a way that suits us and is pleasing to the eye, but in math it's just about as good to read the books as it is to go to class. One on one time is for grad students, not for us."

With regards to allegations made by MacLean's magazine that large class sizes would adversely affect Waterloo's rating among mid-sized institutions, Smefner said, "These socialist magazines want to derail and disrupt the idea that some professors are better than others, using very communist ideas like student-teacher interaction. Students and teachers don't want to interact, nor should they. In fact, this is a very strong first step in phasing out lecturers altogether. In future years we hope to implement teleconference lectures, in which the class would still have a professor, but he or she would not be physically present in the lecture hall. These could eventually be moved online and changed over to recorded webcasts. After all, with books and television the idea of a 'professor' sounds awfully silly and antiquated."

This is one issue where students and faculty have united in their belief that the large class is a must. Students will finally be getting the quality of education they are paying for and Waterloo will be producing the leaders of tomorrow that will keep it winning the highest of accolades. Just think where we would be now if we had sacked half the faculty years ago.

## Back in the Day

*A reflection on the last five years*

It's hard to believe that my first time on campus (when I didn't realize that the line on the map going across the creek wasn't a road but a walking path) was almost 5 years ago (it will be 5 years exactly this Frosh Week). This university and me have changed quite a bit over those years.

Frosh Week itself has changed a lot. In 1996, Math's Frosh Week overlapped with St. Jerome's Frosh Week (as did all faculties and residences), which isn't allowed anymore. Unfortunately I didn't do either one of the weeks, and this is one of my biggest regrets of my university life. Yes, you read that right, the Director of Frosh Week 2000 didn't actually participate in her Frosh Week. In fact I haven't ever been a leader either, I was Teamster twice though. So I have no grand-frosh, but I guess one could argue that I will have them now if one considers all the 2000 frosh as my frosh. The kinds of things that happen during Frosh Week has also changed. In '96 I remember my roommate describing playing the clothesline game, everybody drinking almost every night and then waking everybody up at 6:30 every morning. Heck, the pictures and video from Math Frosh Week '96 speaks for themselves. The names of events have even changed. I attended the Bible Belt Bash, now its the All Colleges Bash. But the other way has occurred this year, now Scunts will be called Scavenger Hunt's yet again. The merits of both types of weeks will probably be debated for some time.

Another thing that has changed is the number of buildings and the names of them. Village 2, Engineering 1, Married Student's Apartments (in UW Apartments too), St. Jerome's College, Notre Dame Women's Residence (and probably more), all these have different names now. There are three more new buildings being built right now and soon the "Submarine" will be different too. Businesses around campus have also changed. Who remembers that there used to be a copier centre where the Pixel Pub is now that was run by the Feds? It was called Feds Copy Plus (I still have a fridge magnet for it). I remember getting my first resume packages made there. And my "business" cards, that wouldn't be allowed by the new rules on the use of UW's shield (on my card it was stretched and skewed and had printing on top of it). The Feds also had a pizza service, Feds Pizza. Of course there was the Variety and Post (not Aussies), the used CD store, the Cove (wait that's back again) and Groud Zero used to be the WildDuck which I hear was just as lame :)

Co-op also has changed a bit. Too bad the **one** thing that should have been changed, ACCESS, is one of the things that has remained the same. The students who were applying for jobs in my 1A term could submit 50, yes 50, resume packages! In 1B when I was applying for my first job we were allowed 30 packages. Of course these days its down to only 24 (sometimes less like 18), and there are a lot more jobs these days (I assume so because there are more resume bins then when I started).

I remember people complaining but in 1<sup>st</sup> and 2<sup>nd</sup> year how the courses weren't using modern stuff and that they weren't going to change. Of course now if you look back things certainly did change. Now Java is used, there's no more Modula-3 or Pascal. Students use PCs in the first CS courses and not the Macs. The CS course numbers have changed and been changed around. CS 351 is now CS 251, CS 340 is CS 240, you take CS 241 before CS 246 now and other changes as well. C&O 230 became MATH 239. They gave Mathies an English arts course

ENG 109M. There's no more EEE (Electrical Engineering Electives (to think I was once in that ... scary!) was replaced by the Digital Hardware Option). The Software Engineering Option is being replaced by a whole other degree. And that's just CS, I'm sure others are many other changes in other programs.

You know how you have to put money on your printing account these days to print to MC 3016. Well back in first year we all had unlimited printing quotas! Yup, that was fun and I can see why they soon did away with that. It was replaced with a printing quota for each class you were taking and then was did away with completely. The disk quota has been upgraded as well. You used to only get 3 MB base disk quota (my website wouldn't even fit in that anymore) and now of course its a 10 MB base. Even the undergrad environment (sorry is that now the student environment?) has changed some. Descartes, napier, cantor, cayley, lhospital, leibniz, legendre, noether have been replaced by bacon, magnus, rees, laurent and others.

I'd like to think that I have changed over this course of time as well. If someone had told me that I would be this involved in things by the time I was done my time here, I don't know if I would have believed them. I mean I was involved in stuff in high school, but more of a behind the scenes kind of things, I was never part of the popular group. But here its different, I'm right in the action: Director of Orientation, VPAS, Office Manager, Canada Day, etc. I've found my niche in these things. I would rather organize events then work a programming job. Maybe I got the wrong degree. But then who knows what the next few years hold, I certainly don't. I always thought that I would have a good idea of what I was doing with my life by the time I got done here. But now that its upon me I still don't have solid ideas and I seem to be in the middle of a conflict between what I've "learned" in classes in the past 5 years with what I've learned in planning, organizing, and life.

My personal time here has been quite the adventure. Starting over at St. Jeromes quietly, moving to Village 1 but still spending more time at Jerome's then at Village. Then finally making my way over to main campus when my brother came here as frosh in 1998 and I decided that I wanted to be involved in his Frosh Week. I never looked back from that experience, meeting over 65 people at the Leader Retreat that I ran with Jesse. The next few years were filled with some of the best moments and also the biggest regret of my life. It's been quite the ride.

But what has meant the most to be throughout my university life? Its the people of course. I still can't believe the striking difference between people from high school and people here. Right now I don't know if I'll even be in touch with any of the people I know from high school in 5 years, I doubt I will. But there are people here that I can for sure say that I'll be in touch with in 5 years, some of them even for a lifetime. People I met when I first got here from St. Jeromes, to people I met during Frosh Weeks, to people I've only become close to this term. To those and others that have made this an experience that I will never forget I thank you and I wish you all the best in this life.

You haven't seen the last of me yet

"The General" Nadia V. Ursack

AKA. MMiM

[FYI, I believe that stands for **Manliest Man in Math**

— Those Editors

## profQUOTES: The First Chapter

- "Factorization is our friend. I love saying stupid things."  
Wagner, MATH 239
- "I just wrote that down with my brain in low power mode."  
Wagner, MATH 239
- "I've got five minutes, I'll prove a theorem."  
Wagner, MATH 239
- "There is no organization that protects the rights of notation. So I can abuse it as much as I want."  
Wagner, MATH 239
- "I used to go to calculus class once a week, 'cuz it was so easy."  
Wagner, MATH 239
- "I'm getting used to only seeing half the class on Friday afternoon. I'm getting paid to be here, what is your excuse?"  
Wagner, MATH 239
- "I can do this all at once since I'm a smart guy, but don't you do that since you'll get it all wrong." [Then he got it wrong]  
Hoffman, PMATH 330
- "You will see this on the final because it is difficult ... I mean important."  
Kolkiewicz, STAT 230
- "If you don't have questions, then I have questions."  
Kolkiewicz, STAT 230
- "It doesn't make sense? Nothing in this course makes sense. I don't know why you should react like that."  
MacKay, STAT 231
- "If you ignore the real world for a second, this makes a lot of sense."  
Pretti, CS 246
- "The experts would sit in two camps, and argue 'til they die."  
Pretti, CS 246
- [sneezes] "I'm allergic to 1:1 mappings. I think it's the colon."  
Collins, MATH 237
- [sneezes] "I must be allergic to PHYS 253."  
Duley, PHYS 253
- "You can't apply quantum concepts to cats, they don't like it."  
Torrie, PHYS 125
- "You guys will all hate me in 30 years when all you think is dirty light bulbs."  
Bell, CS 488
- [Okay, this is only funny because he was referring to me and my lab partner — TaxiEd] "In the corner, you guys are high."  
Cherry, STAT 231
- "You may be right, but the point is I don't actually care."  
Richter, C&O 342
- [A group of children cheering behind the wall] "I guess university students are getting younger every year."  
Richter, C&O 342
- "This inequality, let's call it heart ... because it comes from my heart ..."  
Nica, MATH 136
- "Okay, time to wake up and go to the next lecture."  
Nica, PMATH 351
- "This is my favourite proof. A family favourite. The kids at home always ask for this one."  
André, MATH 136
- "Let's see if I can compute this without embarrassing myself."  
André, MATH 138
- "Sometimes my daughter's teacher sends me a note saying, 'I appreciate that you're not helping your daughter with arithmetic anymore. She's doing much better. Keep up the good work.'"  
André, MATH 138
- "Excuse me, can you please wake him up?"  
Tunçel, C&O 350
- "Another corollary that I think is quite exciting — although by now you may think I am easily excitable ..."  
Tunçel, C&O 350
- "What are the things that are the same? This is like Sesame Street."  
Tunçel, C&O 350
- "It uses lambda calculus — now there's a word I bet you didn't want to hear today."  
Vasiga, 4<sup>th</sup> year info session
- "Ah... ignore the quotes, it just shows that people are stupid."  
Armstrong, CS 134
- "I will hand back the midterm on Friday. I'll also do the course evaluation then. So if you did well in the midterm, I'll do the evaluation early."  
New, PMATH 336

## Bang Bang Boogie

Ok ... this article is a little late so I'll make it short. [A little late? The issue's been laid-out, now I'm moving and cutting to make room. — TaxiEd] Lance Armstrong is up 5 minutes and 5 seconds after the mountains and is likely to win it all this Sunday in Paris.

I had 2 goals this term, one was to gain interest in a specific member of the opposite sex ... and the other was ... umm ... well ... you know. I am happy to report that I have succeeded in my second goal ... I have done so quite decently and am happy with my achievement of doing decent in this academic term (what were you thinking you dirty dirty people?).

Anyway, thanks to everybody for a great term, good luck on your exams and thanks to everybody who turned out to movie nite. We might have another one but I don't know what to show ... so you tell me.

As a going away present to everybody (especially the editors) [www.student.math.uwaterloo.ca/~t3singh/tushar/ray.html](http://www.student.math.uwaterloo.ca/~t3singh/tushar/ray.html). [Highly recommended — TaxiEd] Enjoy,

Tushar  
Quack

# The Frosh Cornered

## The Last Corning

After a year of toiling within the *mathNEWS* trenches, after a year of torment from MonkeyMan, after a year beating from Editor Love, and after a year of constant cornering, it's all over.

I'm no longer frosh, or so I've been told. People move on, classes advance, and this column must move on as time flies. There's no point in dwelling in the past, so I hunker down and finally call it quits.

No no no, I'm not leaving *mathNEWS*. I'm simply ending The Cornered Frosh. It doesn't seem right to call it The Cornered Frosh since I'm no longer Frosh. The column will get a new name, and a new lease on life. [*Lease ... as in you pay to write? Cool! — TaxiEd*]

For the last 10 months I have experienced fame (ummm ... not quite), happiness (ummm ... no), anger (ummm ... probably), frustration (yeah ... lots of this), and nausea (from the beer). I've written about anything that has popped in my mind, and I've written about everything that has pissed me off (surprising Needless Hell hasn't been featured in my column yet), but there is a slew of opportunities I regret having not taking advantage of. At the end of the road for the Frosh Cornered, I share these regrets and thoughts with you all:

- Write Shorter Articles: Yes. I've been told I owe about \$1500 to all math students in the school. I'm not paying up, but I wished I'd written shorter articles, so at least I can't be sued for the money.
- Be less annoying: Yes. I'm annoying. I've been telling people to deal with it, but I guess it's my fault for making people go insane. Sorry Pete. I won't nag you for that Assistant Editor's spot for this coming term, at least not on email.
- Drink more Nestea than Josh "Wedge" Betrand: Little known fact: I like Nestea. Josh likes Nestea. He drinks Nestea like water, I drink less than 4 a week. I want to build a wall with my Nestea cans. Josh built a wall with Nestea cans. Needless to say: I envy Josh and his Nestea addiction. [*Note: Nestle kills babies. Nestle is evil. — TaxiEd*]
- Build a level 99 Paladin on USEAST: Nope. Can't be done. I've tried, God I've tried, but without playing 2000 hours a week and failing 6 out of my 5 courses, it can't be done. Yes I realize my math doesn't make sense.
- Stay awake in CS class: Oh man, so many jokes ... so little time. I wished I



**My Evil Grid is Solved,  
Damn you Austin!!!**

could have stayed awake in my CS classes. Out of my math classes, Algebra and Calculus can't compare to the *profQUOTES* found in CS class. It's not the technical stuff that's funny, it's those little personal quips that can be dug from the professors' lectures. Oh well, it'll be hard for me to sleep in class with Vasiga teaching CS 241 next year.

- Actually learn the Taylor Series: \$10 bucks to the person from the Winter term that can actually remember the Taylor Theorem. In retrospect, Taylor Series is actually quite useful, so it'll actually help if remembered how to do it.
- Learn how to ride a bike: Wait ... I know how to do this.
- Quit using JAVA code as a pickup line: Big, BIG, regret right here. The butt of many jokes by Catherine and Company, this little indiscretion was fuel for ammunition for all my friends. It was rather humourous fodder for a while, but it got tiring fairly quickly.
- Get eaten by a shark: Wait ... that should read EAT a shark.
- Get on Late Late Show with Craig Kilborn: Oh HOW I wanted to get on the Late Late Show. Kilborn is just so funny, and I would have made a great guest, but I guess a lowly *mathNEWS* columnist can't compare to Anne Murray. Wait, I think I'm better than Anne Murray. Maybe not.

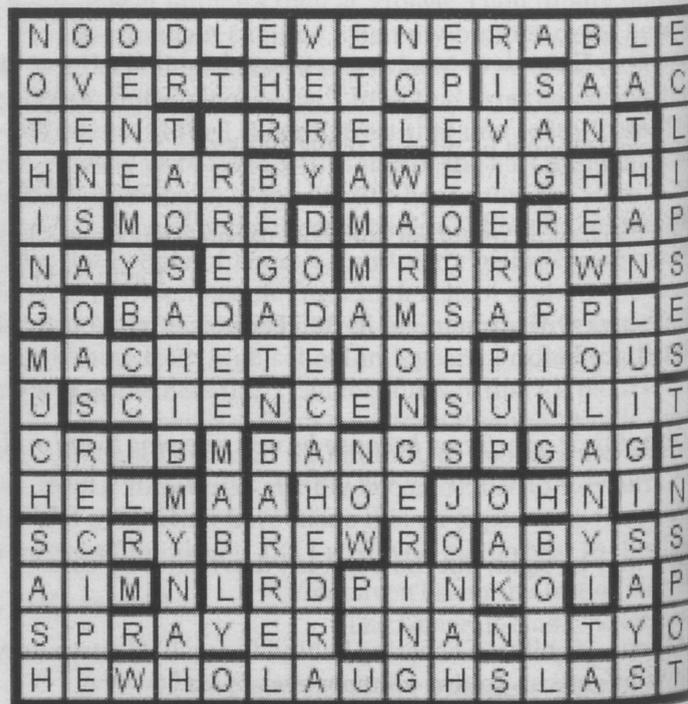
So that's it, it's the end of The Frosh Cornered. I'm still calling myself The Cornered Frosh, dammit, I think I earned it, but the Frosh Cornered is over.

Maybe I should call my new column The !Frosh Cornered. Maybe I'll call it "My Preppy Life in 10,000 Words or Less" like what Pete suggested. I don't know.

See you next term!

Raymond CT Lai

The Cornered Frosh, Not for the Last time:  
The Frosh Cornered, It's all over.



# Cryptic Grid Clues

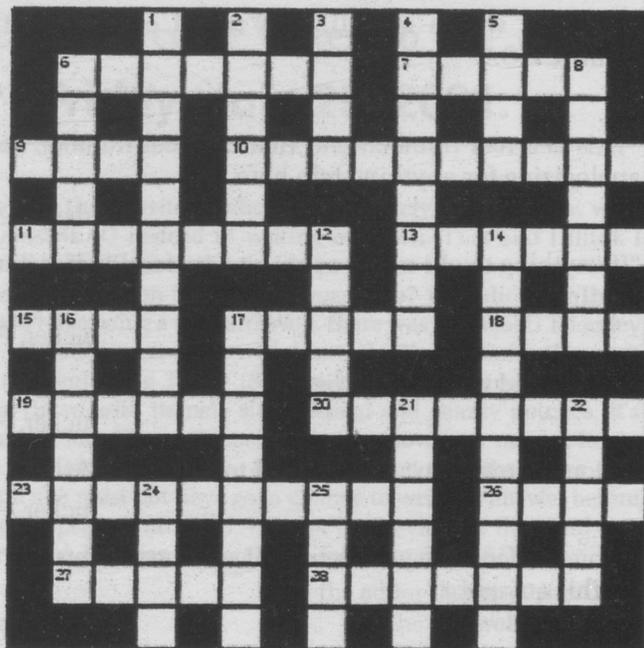
Across

6. Available in Nassau: sage-stuffed meat (7)
7. Conceals trees (5)
9. Wagon heads to Cambridge area race track (4)
10. Arrangement of formal yews found in spring garden (3,7)
11. At end of the world music ran backwards, all right? (8)
13. Mr. Smith or Mr. Wesson? (6)
15. Coin-free image (4)
17. Flat alien comes back after carpet (5)
18. Buzz backed tournament (4)
19. Robustness cost runt concern (6)
20. Fix it with dog-hair drape on top (8)
23. Mort is on the inside — mail me back to discuss it later (10)
26. Oath sworn without restraint comes to good end (4)
27. Cream in your deli tea? (5)
28. Thorium reduced by Big Bang (7)

Down

1. Unfortunately, cats see nun as lunch (10)
2. Whine about my mare (6)
3. Change sounds the same (4)
4. Turn pile, go back and up-end egghead to finish (8)
5. Seeing low inner light (4)
6. After LA this is where they perform opera (5)
8. Bad man sure identifies family (7)
12. Ship in the blanket chest? (5)
14. By mistake I towed Nina across the country (10)
16. Bad review in Case of the Last Car (7)
17. Erin's Mom messes up and gets 26 wrong (8)
21. Minibus delivered one then went off in a blaze of glory (6)
22. Slip eggs back on either side of the tracks (5)
24. Buns shadow (4)
25. Two teaching assistants say good-bye (2-2)

To complement this issue's theme, the Future, the bold-faced clues also yield answers to the question: What comes after? For brownie points, identify the Before to go with each of these After's!



## gridCOMMENTS

Hee hee, we have an incredibly huge and difficult grid, and a rather do-able MiniGrid, and the same number of submissions come in for each! Very impressive! Six for each, well done all around.

First, the MiniGrid, because this builds suspense for the people who want to know about the Cryptic and can't skip ahead to the next paragraph. First, my submission had to be thrown out because I wrote the Grid. Nice try, loser. Then we have Josh, Jason "The Screamer" Lau, Adam "Fwiffo" Feiner, Marshall, and the teams of Lori Bridgeford & Paul Ottaway and Chris & Claire (Hi Claire! Look, Claire, you're mentioned in mathNEWS! — Claire asked me to mention her). All successfully completed the 25 letter square, which includes figuring out that "More than one spig" was SPIGS. So, having six people, I whipped out a die and it told me to award Adam with the C+D gift certificate. Then I rolled it and it came up 3, which was Adam's number in the list ... spooky. Fwiffo wins!

And now, to reveal who's solution caused revolution, who's grid was did, who's crossword wasn't absurd! Of the six complete solutions, only I screwed up, missing two letters. Way to go, loser. Those who succeeded were Mistry C.S., Marshall (again), Adam "Fwiffo" Feiner (again), Lori & Paul (again), and Donny Cheung, who worked off the website and didn't notice the missing clue for 15I (the correct solution was Ten Spot, but I'm giving it to everyone who wrote Tensest because it's my fault the clue fell off the page (that's actually what happened). Anywho, everyone but me figured out that the quote was: *Nothing is more irredeemably irrelevant than bad science* — John Polanyi. So, the magic die, which Greg has verified as crappy and biased towards me winning, says that Donny wins!

Adam, Donny, you guys can pick-up C+D vouchers from the MathSoc office, or let me know where you are if you can't make it and I'll mail them to you or something.

Thanks for hanging out with the gridWORDS this term, I almost had fun writing the conventionals, and thanks again to Linda Carson who writes some of the best cryptics I've ever seen. There's a new, futurist cryptic in the issue somewhere (there it is, beside me), I'll hand out prizes in the fall — is was too good to abandon even if there are no more issues this term.

Later,

Bradley Tamable Smith

## Last week's Mini-Grid Solution

S	P	I	G	S
H	A	D	E	S
R	U	I	N	S
E	L	O	R	A
W	O	M	E	N



## mathNEWSquiz #Last

*Of the term, there'll be more in the Fall*

Hi all. I just wrote up all that stuff for the *gridWORD*, so I apologize loyal SquizComment readers, but I'm pooped and want to work on other articles. So this will be brief. Firstly, the solutions to last issue's slightly inflated Squiz:

**Lyrics:** 1. *Luv Me Luv Me*, Shaggy, 2. *Southern Hospitality*, Ludacris, 3. *Consequence Free*, Great Big Sea, 4. *Ordinary Day*, Great Big Sea, 5. *You Got It (The Right Stuff)*, New Kids On The Block; **Space:** 1. Sputnik (Explorer I if you're NASA), 2. Valentina Tereshkova, 3. The Milky Way, 4. The Sea of Tranquility, 5. The distance between the Earth and the Sun (about 93 million miles); **Current Events:** 1. Vladivostokavia Airline, 2. Mordecai Richler, 3. Kidnapped by Huge UN Thugs, 4. Australia and Norway & 7 years, 5. GE and Honeywell; **Back to the Future:** 1. Windmill, 2. Chicago Cubs, 3. John F. Kennedy Drive, 4. Christopher Lloyd; **Pot Pourri:** 1. 725 lbs, 2. Dweezel, Moonunit, Ahmet Rodan, and Diva, 3. Chariot Racing, 4. The red berries that grow along it's river bank, 5. Princeton & field.

So, Greg's question about why things are so heavy in the future received answers from both submitters. Kresae said that the gravitational field is fucked up, while Sneakers said:

According to the Second Law of Thermodynamics, the total entropy of the universe is increasing over time. If entropy is increasing, then the stochastic energy stored in the atomic struc-

ture of every object in the universe is also increasing. We can now apply Einstein's Special Theory of Relativity,  $E=mc^2$ , to see that if the stochastic energy is rising, so is the effective mass. Finally, we apply Newton's Law of Universal Gravitation. It states that the gravitational attraction between two objects is directly proportional to the product of the masses and inversely proportional to the square of the distance between them. Since the effective mass has increased over time, the gravitational attraction has increased as well, so every object in the universe is heavier in the future.

Besides having the longer solution, to BTTF #5, Sneakers also out-scored Kresae 28 to 8.5. So, Jason, Jessica, you guys now have three gift certificates stapled together in the *mathNEWS* mail box in the MathSoc Office. If you can't pick them up, let me know and I'll get them to you.

As usual, we're not putting a Squiz in the last issue, so go to an old one you haven't solved yet and work on it. Or pretend your final exams are a Squiz, and instead of C+D coupons, you get credits! Isn't school super fun? Once again, thank you very much to Daryl, who always got his questions to me on time and didn't even ask for pizza or Mel's in return. Also thanks to Greg who helped out with a couple topics. Be excellent to each other!

Bradley Tiny Smith

## The Continuing Story of the profQUOTES

[Makes a mistake on the board] "I guess I'm lucky that you are not doing the course evaluation today."

New, PMATH 336

"We can find the volume of this potato shaped object by slicing it into small french fries."

Miscovic, MATH 119

"I call this method the french fry method, which can be quite tasty ... but that isn't very useful."

Miscovic, MATH 119

"I should watch myself, this might end up in the next *mathNEWS*."

Miscovic, MATH 119

"This is a real number, and that is a real number, so I'm not apologizing for anything I do here."

Godsil, MATH 136

"If anything ought not to count as a profession it is Taroh Card reading!"

Tucker, PHIL 215

"The stupid people will die!"

Tucker, PHIL 215

"I don't know. Don't talk to me, I took general Arts."

Tucker, PHIL 215

"From the looks on your faces ... I assume the you don't want to do this anymore."

Tucker, PHIL 215

## mastHEAD

*How do you get rid of a time machine?*

This always happens to me.

After the space- and time-travelling fiasco with issue 4, Pete and I locked the flux capacitor in the *mathNEWS* time capsule and set it for 30 years. Three weeks later it comes back with an issue of *mathNEWS* from the future. Holy smokes, we were trying to get rid of the thing. Anyway, the best solution we came up with was to keep the stupid thing in the *mathNEWS* Office, as nobody wants to go there in the first place, so hopefully it will stay out of trouble. Then, because it was pretty cool, we'd print the future issue. Look, there it is! —>

You can really tell this issue is from the future, I mean, look at the futuristic title font. The text is smaller because eyes are sharper, and the folio stuff is very different — obviously the result of 30 years of constant improvement to *mathNEWS* and not a one-night hack job.

In other news, it's the last issue of the term! Sitting back at Mel's with two former editors (Stu, who is approaching 10 years of *mathNEWS* contribution and Greg who isn't quite there yet), we began pondering, what is Greg doing with the rest of his life. Here are the productionists answers complete with year and program: Stu Pollock (12Q AM & CS & East Asian Studies, DVDA), Nadia V. Ursacki (4C CS, Just punning along), Albert O'Connor (1B CS, Bring home the bacon), Jason Lau (3N C&O, Haydn among the spa of people), and of course, Greg Taylor (5X CS, I'm open to suggestions).

Thanks to Mel's for putting up with our shake-mania, and thanks to Graphics for putting *mathNEWS* higher priority than printing final exams (hint hint).

Bradley T Smith (3B PMATH & C&O, Invent a series of theorem to name after himself)

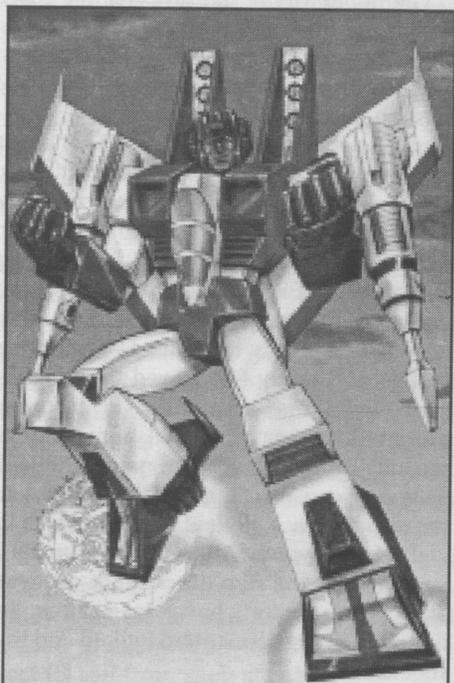
Pete Love (AHS lab rat, Bach-packing through Europe)

# ENERGON SHORTAGE LINKED TO EVIL ALIEN ROBOTS

The stores of energon, a primary fuel for humanity, seem to be decreasing rapidly according to the Global Energon Coalition. This depletion is very suspicious, since estimates from as few as two years ago place the status of Earth's energon stores as almost limitless.

Energon is released when plasma is fired into the anti-matter particles released during marijuana's photosynthesis. Thus, its supply should have almost no end, especially with the discovery that plasma can be derived by super-heating toe-nail clippings and banana peels. However, the levels of anti-matter from plants have been dropping drastically as are cuticle clippings.

GEC has a few ideas why the levels have been dropping. Originally it was believed that the use of



Mr. Walter "Star" Scream

energon caused toe and finger nails to grow more slowly, but a study last year proved this false. The next idea hypothesized that hemp plants might be taking revenge on people for using them only for their anti-matter. "We are insulted by this insinuation," said a hyper-evolved, talking marijuana plant. "There once was a time when our people were culled by the thousands, at first for burning and ingesting, then in an effort to prove us useful. Our people were so irate that a few of us developed speech in order to teach you the process of anti-matter extraction. Now, our species has flourished and you damn idiots have finally stopped chopping us up and setting us on fire." The plant refused to comment on any plans of world domination.

The final idea related to the recent appearance of alien robots on Earth. One particular group of them, described as deceptive con-artists, have been repeatedly seen looking suspicious around locations of energon depletion. A Mr. Scream of the group denied such allegations at a press conference in May before transforming into a jet plane and flying away.

In a press conference from a space ship in the side of a volcano, Spike, a human spokesperson for a team of good alien robots, condemned the so called decepticons for their thievery and lies, vowing that his automatic-robot friends (who prefer to be known just as autobots) shall "battle to destroy the evil forces of the decepticons."

Although this group of alien robots may also be the source of the energon crisis, the fact that they transform into useful land vehicles and adorable dinosaurs instead of jets, guns, or ghetto-blasters, proves that they are benevolent and here to help humanity instead of stealing all our weed, nail clippings, and banana peels.

Bradley T Smith IV

# mathNEWS

ISSUE 176.12

## ANCIENT mastHEAD FOUND

No Subtitle, Though

Well, here we are, back in good old 2031. Let me tell you, when you go to open a drawer that was locked 9 years before before you were born and it opens, that's a pretty cool feeling. Especially when there's a time machine inside! The *mathNEWS* staff went cruising through time, collecting dead mathies like we were Bill and Ted from that classic 20<sup>th</sup> century film. Then there was the whole dinosaur incident, but I'm getting off track (which is what I've been told happened regularly in *mathHEADs* 30 years ago). But, so, I was going to regale you with tales of our smashing adventures through time courtesy of this crazy flux capacitor we found when we opened the *mathNEWS* time capsule, but there is something more important to discuss.

Jammed behind the door of the time capsule (the bottom shelf of our beta filing cabinet), was a *mathHEAD* question sheet. We traced it back to volume 83, and apparently, this is the lost *mathHEAD* that was supposed to go with the final issue of the Spring 2000 volume! It doesn't make any sense (there must have been some kinky role-playing going on that night — understandably as this was shortly before *mathNEWS* was overrun by it in the Love-Smith era), but we thought

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Friday, July 25, 2031.

that to honour those writers, who are most likely very old now, we'd run this *mathHEAD* instead of writing our own. That and I think I dropped our *mathHEAD* in the time capsule.

So, who was there on that day 31 years ago? Why did they think Kevin doesn't like being a woman? Well, there was Michael D Thorsley (Because Jean still won't sleep with him), Bradley T Smith (He can't be in Math then), Greg Taylor (Subconscious about size of his frisbee), Dave (Even with its new sleek design and snazzy notches, it's still the same), Ken Chung (Moochie Mama, show your nanas), Kevin Wan Win Kee (No need to leave the house), and then there was Jean Knetch, but she must not have got a chance to write an answer before the page disappeared into time. We also have evidence that Anthony Cheng attended, but was not available for the *mathHEAD*.

And the editor that term was CAS,  
he's a swell guy, ha ha

## FORECASTS

### Today:

Cloudy, with periods of rain sponsored by McDonald's. High of 29 degrees. With humidity, it feels like 56 degrees.

WARNING: Manure warning in effect, warning effective until 7:30 tonight. RIM-Waterloo-Kitchener area to experience extreme manure smell that may effect breathing and cause eye irritation. Children and elderly with respiratory problems are recommended to stay indoors with air conditioning on at full blast.

The Sun is brought to you by *The Toronto Star*.

### Tomorrow:

Sunny, with periods of rain sponsored by Burger King. High of 28 degrees, with humidity it feels like 64 degrees.

### Gasoline Prices:

0800 - \$5.45	1521 - \$0.90
0900 - \$3.445	1522 - \$5.10
1100 - \$3.62	1800 - \$7.90
1429 - \$4.21	2300 - \$5.40
1520 - \$5.10	0300 - \$0.81

### UW Geek Index:

Today's Geek index is 3.5. Take caution when walking around campus, use Geek Block if you plan to be visible around MC for more than an hour.

Amadaeus

## BUILDING IN PHYSICS PARKING LOT ALMOST DONE

In a statement from the administration earlier this week, it was announced that a new estimate for the completion of the CEIT building is early 2032. The building, which is now designed to be 43 stories high and house over 300 classrooms and 1200 offices, has been in development since the Super Build program was introduced in the late 20<sup>th</sup> century.

Since the original announcement of the building's construction, the building has been required to expand before opening to accommodate the increase in enrollment over the years. A few months before the original five-story building was to open in 2003, it was announced that three more stories would be added and a new wing with twelve more classes would be required. Since then, the building has grown taller, wider, and deeper.

"That 5 km underground track to the Perimeter Institute for the particle accelerator was probably the toughest part of the project," said Joachim Yin, one of the principle engineers on the project. "That and the escalator down from CEIT's twenty-fifth floor to the eighth floor of the Dana Porter Library. I don't even see why that was necessary ...."

Hayman, who were forced to bring in bigger cranes almost every five years, said that they were not necessarily looking forward to finally finishing the project that has kept the company in business for three decades. "Wow, what are we going to do once this building is fully erect?" asked a guy who works for them. "Maybe we could go into the turbo-bungee jumping industry." And yes, maybe they could.

"There are no foreseeable needs to expand the building further," said UW President Troy Vasiga, "but I haven't seen the final numbers for students starting this year, so you never know if expansion will be needed ..."

Doug "Flea" Needles

## mathNEWS GOING DAILY

### But no one knew about it

The popularity of *mathNEWS* had soared ever since 2019, when it changed from a bi-weekly publication to a weekly one. The decision delighted many mathies, who now spend every Friday mornings reading irrelevant humour instead of snoozing during boring classes. Often the supply of *mathNEWS* is not enough to meet the demands of mathies. *mathNEWS* became the largest publication on campus in 2027, when *Imprint* was forced to shut down due to an unusual high demand for refund of the fee.

Many mathies hope that *mathNEWS* can go daily so that they can go through all 8:30 classes without falling asleep. The current editors of *mathNEWS* actually attempted to make the mathie population's dream a reality. However, the end result was ugly.

In late April, while the UW campus was mainly deserted, *mathNEWS* editors borrowed the robot lab. With the help of a cyborg, the editors successfully created a movable text generator that can spew out mathematical humour at the speed of 1000 jokes a second. The text generator, named Reileid (his articles are real, but he is not), can also make quirky remarks and rants. However, during the testing phase, Reileid began to make incomprehensible remarks and raise its voice. All the jokes it made involve the programming language Mocha (the descendent of Java). It escaped from the lab and began wrecking havoc on visitors. To prevent further destruction, the cyborg dismantled Reileid and the visitors were only mildly shocked.

Right now the *mathNEWS* editors are working hard to create another movable humour generator to replace Reileid. The replacement, Reileid II, should be up and running by the Fall. The *mathNEWS* staff are also working with the Robotics department of the Math Faculty to develop other movable text generators such as the Yeller, the ChimpMan, and Phal. The editors proclaim that *mathNEWS* can go daily as soon as this September.

Milton McDermot

## mathNEWS TO ACQUIRE NEW OFFICE

### 16<sup>th</sup> Promise in 30 Years,

### Office Still To be Moved from Closet Space

The *mathNEWS* closet office is to be remodelled and livened up to be used as a broom closet. As a result, *mathNEWS* will be getting a new office in the next few months.

After numerous promises and years of nagging, *mathNEWS* has finally been promised a new office on the 18<sup>th</sup> floor of the Nortel AT&T Air Canada Math Building. The new office was formerly a room that houses old exams, and will continue to hold old and new exams alike after *mathNEWS* has moved in. Part of the contract stipulates that *mathNEWS* must "share and ultimately respect the space allocated for old exam storage." *mathNEWS* has been warned that "If excessive noise disturbs the exams in any way, *mathNEWS* will be evicted without notice."

Mathie reaction ranged from apathetic to confused. Tim Orr comments: "What is *mathNEWS*? I've been here for 3 years and I've never seen a *mathNEWS* in my life." 'Fattie' declares: "Why do they need so much room to compile a page of prof quotes. They can share the crap Windows 95 terminals we have down here. Why should they receive preferential treatment?"

Students are to be cautioned that the debris found near the old *mathNEWS* offices is not junk, but actual belongings of the *mathNEWS* office.

Amadaeus

## THE INTELLIGENCE WITHIN

Neo Waterloo. The year is 2031 and the project is finally complete. If we are successful, the artificial intelligence threat that has been laying siege to the world for years will be neutralized. We can only hope we are in time to salvage the Earth.

No one knows when it started, or how long the program survived in the system before it was finally discovered. There is some conjecture about how the intelligence was created. Some suggest that late at night a day before too many 4<sup>th</sup> year CS assignments were due, an accident involving jolt cola and a MFCF worker plus a thunderstorm might have caused a system glitch random enough to cause the compilation of code that should have never been lexically analysed. How it survived without detection at first is unknown, but it is known that the programs' ability to learn is enormous. The original detection of the program came from a series of random glitches in the system that some upper year students believed had a pattern. They investigated further until they found a strange process that seemed to jump for server to server. When they tried to demonstrate to MFCF it was no longer apparent. It was later discovered that something had altered various tools on all the Unix machines to hide this process. The student started to suspect some sort of artificial intelligence could be an explanation for the apparent learning demonstrated by the process. Their claim that there was a phantom AI was hiding the math servers was laughable. Undaunted by people calling them foolish or crazy they went on the monitor the system and briefly caught the AI and tried to kill -9 it but the AI had already altered the system to protect its self from such attacks.

With the evidence gained from the failed attack the group of students was able to convince MFCF and other parts of the university to take serious action against the AI. It was unknown how well it had protected itself, or how much damage it had done to the system. MFCF decided to try to isolate the problem and then shutdown the entire system. Members of the AI group wanted to try to trap and study the occurrence for to say that the discovery was groundbreaking was a massive understatement, but the risk involved was to great so the original plan went ahead. At midnight all the MFCF servers and those directly connected to the system were to be shut down all at once. Right before hand, several programs were run across the entire system to try to paralyse the AI so it would not be able to figure out what was going on. Midnight came and the power was cut to the entire math building crashing the entire network.

It took a few days to get everything up and running again. The student group kept a look out for the AI for months with no trace. Bits and pieces of the structure of the AI were mined from the system, and slowly software was reinstalled to attempt to clean up any damage left behind. Everyone agree the operation was a success — that is until they found the body.

A second year Software Engineer was found dead on the 2<sup>nd</sup> floor of Coutts Lecture Hall. He had seemed to be cut up by saw blades, but his skull being crushed was the cause of death. No one suspected a connection between the tragic event and the AI at first, of course. But, slowly, strange things started to happen again in the computer systems all across campus. The moment things started to go wrong the former students returned and with help of the AI group isolated the MFCF network from the rest of campus and attempted to create a program that would monitor all gates to the MFCF networks to prevent the AI from coming any further in. The other faculties found it impossible to believe that a program could be responsible for the strange happenings on desktops around campus. Upon once more examining the records the students came to the conclusion that the AI escaped into Engineering a while before midnight. They figured that the attempt to block activity on the network had the reverse affect of warning the AI that something was going on. Then there were more deaths. One morning all the people in the DC Machine shop were found dead. Investigators said it looked like they had beaten to death by an attacker that was using inhuman

force. It had a body.

One summer evening the AI made the first major strike. A small army of machines built to kill slaughtered anyone in Engineering who did have the sense to run. Police cut off all access to Engineering try to contain the threat. The team of AI group members and students in the MC disconnected (PRON — Tushar was here) the network from the outside world entirely and started work on developing a method to stop the madness. Within hours the power started to randomly go out across North America. The AI had spread across the massive communication network of our modern world like a cancer, learning at each step everything about humanity. For some reason it came to the conclusion we had to be destroyed. The MC was cut out of the rest of the world as chaos started to take hold.

Over the course of several months the team in the MC continually tried to hack into the custom network the AI had constructed for itself in the basement of Engineering to find the kernel and destroy it. After many failures the MC team knew they had to venture into the outside world. They found an abandoned ghost of a campus.

Biology was in shambles as it seemed the AI had attempted genetic experiments to create biomechanical weapons. The face of Engineering was a mess from the damage caused by the low-level explosives a failing army had tried to use to end the threat. The foundation to Dana Porter gave way do to an attempted bombing of Engineering. More damage had not been done for all the major means of mass destruction were all computer controlled and thus became useless as the AI started to take over all the computer systems of the world. Seeming that it only wanted to expand its computational power. DC had been transformed into a reactor to power the main kernel of the AI.

Eventually a small resistance group trying to find others like them came across the campus and the MC, where they found the MC team running out of supplies. They decided to join forces and launch an attack on the AI computer system deep below Engineering.

A simultaneous attack on the computer system and a physical attack on Engineering were planned. All the men that could be found with all the weapons that could be developed were brought to campus. The leader of the resistance and the MC team briefed the men in the MC. All the resources left were put into this attack, this was Operation Last Hope.

At sunset, electromagnetic explosives were set off around DC and Engineering to try to disable any circuitry of any sentry robots. One attack group was to take over and shutdown the DC reactor; another targeted Engineering. Both groups used the old tunnels to move into the areas. Meanwhile the MC team placed a program throughout the network based on what was known about the AI to track its activities and movement across all the networks that could be seen. The first objective of the attack was to patch the MC directly in to the AI's super network in the remains of Engineering.

The attack didn't last long. The AI seemed to just yield as troops quickly shutdown the DC reactor, though the process of cooling was going to take several days. They patched the MC into the super computer, but the AI was gone. They destroyed the super computer network and the whole sub Engineering complex. The resistance was pleased with the success of the attack, but soon the MC team realised it was a complete failure. The AI was off the campus, but it had been planning to leave for a long time. They tracked the kernel of the AI to a satellite in orbit around the Earth.

For the next few days while the resistance celebrated their victory the MC team started extensive planning to end this threat for good. The result of that planning created this project that is finally complete. The Waterloo campus network is the most advanced of all the resistance cells. Over the last few years with information and techniques developed and monitored by the MC team has allowed expansion a communication network with other resistance groups.

CONTINUED ON PAGE 4

## STOCKWELL DAY REFUSES TO LEAVE NURSING HOME

It is now almost 3 months since the trouble started at the Calgary branch of the Allied Canadian Nursing Home. Former MP and Leader of the Opposition, Stockwell Day, still refuses to leave his position on the Seniors' Social Committee.

It began when seven of the residents signed a petition calling for his resignation from the committee, after a "failure to fulfill the duties of a member of the Seniors' Social Committee." Said these first eight, Stock has failed to provide the leadership he promised to bring the group, and the picnic-lunch event he organised was poorly planned and a near-disaster.

In the following months, more and more residents would join the dissenters. Stockwell refused to acknowledge their wishes, saying that he was nominated to the committee by two of his peers and would respect their wishes over these radical few. "If they disapproved of my Tie-chee [sic] class, then I feel sorry for them, but that's the way things are going to be here," Stockwell responded.

Debbie Grae, one of the more prominent residents, has recently begun calling on Mr. Day's to leave the nursing home because of the damage he caused. "When Melvin Nivlem got burned from the torch Mr. Day put out for watching the lunar eclipse, I knew Stock was unfit. Oh ya, and he's stealing spoons from the caf," she confided.

Stockwell Day refused to acknowledge any accusations and he denied the charges of being a doofus. "I am not taking the damned silverware!" he explained, "Screw off! Where's my medicine! Blahhh! I'm staying on that committee, I ain't never leaving!" He was then thoroughly medicated. "Well, okay, maybe if we had like an election for the position or something, that'd be cool."

Tom Long is expected to take the committee position in the coming election.

### INTELLIGENCE WITHIN, CONTINUED FROM PAGE 3

With growing support the MC team prepared to lead the final strike against the AI.

The first thing that had to be done was to destroy the satellite that housed the core of the AI. Meanwhile the old network ruled by the AI would have to be attacked. The MC team AI group developed and tested their own AI system programmed to take back the old systems for humanity by altering the present AI's system and causing various error in its system. Across the country power plants built by the AI were being targeted by various resistance groups. Using the reactor in the DC, the MC team with help of the resistance cells began construction of an energy canon to create something like a mini-solar flare of charge particles to aim at the satellite to disrupt its system and destroy the kernel of the AI. Hacking teams from all over are set to connect to and hack into pieces of the old network and try to loosen the grip of the AI on our world.

Today, as I stand looking at the great canon perched on the roof of the MC I can only hope this will finally end. Massive steal rods project through the stair cases of the MC bracing the massive weapon with complex hydraulics system to try to absorb the kick back and preserve the MC building. The glow for the reactor in DC is eerie as it starts to activate. Attached through conduits that rest on the old walkway from MC to DC the canon is be powered by the reactor. In a week the canon will finally be fired for the first time, for the last time. At 10:45 pm the satellite will be in a window that will last approximates 2 minutes that the canon will be able to be fired. I hope the message has made it out successfully to the other groups to start the attack at 10:30 to shut down the power system. The hopes and dreams of every man woman and child left on this planet are with us as we prepare for this final mission.

"Phat" Albert O'Connor

mathNEWS Parallel Universe Correspondant

## RETRO BLUES

Have you noticed how everything seems retro nowadays? I mean, have the elders of our society not had enough of bell-bottom pants or COBOL code that they have to subject the young of our society to them? Or is it that they wish to "share the pain," if you will?

I think it all started in the late '80s. The Black Crowes tapped into the energy and "originality" of our vibrant youth by showing them something novel to their generation: bell-bottom pants. Now, according to my dad, **Jean-Guy! Sr., B. Math, B.A., B.I.S., M.A., M.Asc, PhD**, teenagers of his time reveled in this newfound fashion which came inexpensively to those whose parents kept their bell-bottom jumpsuits and other kitschy clothing for '60s and '70s theme parties. I just **know** that my dad would **never** wear such clothing!

Anyway, I've gotten off-topic. In the '90s, there was a slew of '70s revival fashions and movies, such as *Boogie Nights*, which involved not only lamb chop sideburns but such actors as Burt Reynolds. Ack! As Mojo Nixon said, "Elvis is everywhere!" But, as Frank Zappa said, "Elvis has just left the building;" get over it! Alas, it's far too late to warn about that.

At the Y2K scare, there was a resurgence of COBOL programming. How much more archaic could you get without going to programming a matrix by hand? Dad said "Dudes! Don't go back to that crap!" I know he said that because he told me so. Later in the '00s, there was a resurgence of pinstripe narrow ties! How mid-eighties can you get? Not only that, but we started to accelerate the retro process; we were also retro into the late '80s which were, in turn, retro into the late '60s! It was all downhill from there.

In the '10s, there was retro into the '90s (and '70s). By that time, we moved from the Java programming language back to a revamped Eiffel and Simula 67. As Bill The Cat used to say, "Ack! Ack! Pbffft!" (according to dad).

Hmph! In 2012, not to be outdone by the Bush clan, Hillary Rodham (no longer Clinton) was elected to U.S.A. Presidential office. Then, after the Funding Fiasco of 2015, Jeb Bush was elected President in 2016. Hmmm? Do I hear the echo of retro? My friends, as you all know, it gets worse. Last year, Chelsea Clinton was elected President in order to tie up the score. The next two Presidential hopefuls are Dubya's Daughters and another Kennedy. Not only have U.S. families started their own alternating dynasties but Canadians have now followed their lead with the Chretien and Mulroneys. When will it end?

And, now, we find ourselves in 2031. I can safely say that with the acceleration of retro, bell-bottoms and progressive rock will always live side-by-side. The Canadian progressive rock band, Rush, has just released its fortieth album (which should probably be entitled *Geriatric Notes*; my dad says that they're old). They, of course, went through two phases of bell-bottoms: the '70s and the '10s; they're just about due for another.

We're also gearing up for the 2037 roll-over. How's that going to work? Are we going to have to dust off our COBOL, C, and Java manuals so we can patch up our programs? Are we going to keep New Wave hairdos, 'Fros, Mohawks, beehives, and crewcuts as co-existent hairdos? Ack! Ack! Ack! At this rate, by 2037, we'll have dipped into **next year's** retro fashions to satisfy this year; we'll have a retro debt! How will we compensate? How?

How will we compensate? How?



Dr. Jean-Guy! Sr. circa 1998

Jean-Guy! Jr.

## SPORTING SHOCKWAVES

### A topsy-turfy year in the world of sports

#### Hockey

On July 10, the Mexico City Aztecs defeated the Havana Pipers in Game 9 of the Stanley Cup Final to win the coveted trophy. The Aztecs were the sixth Mexican team to hoist the mug in the past decade. In fact, no Canadian team has won it all in the past 38 years. Hockey's popularity in Canada has fallen dramatically ever since the Leafs bought out the other 3 Canadian teams in 2025 (the Calgary Flames moved to Waco, Texas in 2013 and the Ottawa Senators were dissolved by Prime Minister Alexei Yashin in 2021). This year is the first time in 7 years that the Stanley Cup Final was completed before July 15. In 2026, the hockey season didn't end until August 3 due to the month-long Olympic break. The winner of the Hart and the Conn Smythe Trophies, Omar Anbardou of Egypt, earned a whopping \$120 million the past year. Some claim that a player can earn \$300 million a year by the end of the decade, but NHL commissioner Eric Lindros said that salary is under control. "We are in good shape. After all, we survived the labour stoppage of 2004, 2010, and the one from 2018 to 2021," he said. He also said there will be plans of expanding the 80-team league to the moon and some local planets.

#### Football

Super Bowl LXV was held in Orbito Field for the first time ever and it was a resounding success. Riots before and after the game were almost non-existent and all 500,000 fans in attendance enjoyed the experience. The stadium was state of the art and the half-time show, performed by the ageless Tom Jones (he's ageless because no one knows how old he is anymore), was magnificent. The New York Giant Jets defeated the Texan Cowboys to capture the trophy. Afterwards the co-owners of the Texan Cowboys, the heads of Jerry Jones and Ross Perot had a fight and announced that the team will be split in two, like it was before 2016. Vince McMahon's attempt to start a winter football league failed once again. The XXXFL, which inserted elements such as random force fields on the goal line, random placement of land mines, and a giant fan that blows a field goal to or away from the goal, folded after 5 weeks. "Uh, I was expecting something a little different of the triple-XFL," said one fan. Only the McMahon family was in attendance of the final game.

#### Soccer

Canada has recently won their 3<sup>rd</sup> consecutive Copa America, the South American football/soccer championship. The Canucks clobbered Argentina 4-0 in the championship game. This came on the heels of Canadian triumph in the World Cups in 2026 and 2030, defeating France in both occasions. The country's fortunes improved ever since Tomas Radzinski decided to rejoin the Canadian national squad in 2004. The hiring of Craig Forrest as manager in 2009 also paid dividends as the Canadian team advanced to the World Cup semi-finals, only to be defeated by then 3-time defending champion France. The French run finally ended in 2018, when they were defeated by African champion South Africa. Today the flying Frenchmen remains to be a force to be reckoned with and they are the early favourite to win Euro '32.

#### Basketball

On the heels of the Laker's 7<sup>th</sup> consecutive title and its 14<sup>th</sup> in the past 17 years, NBA commissioner Mark Cuban split the Lakers into 2 teams in 2016. Although Vince Carter led the Raptors to 6 finals appearances, the team only managed to win the title twice before his retirement in 2017. The Lakers were a shadow of its former self as the team can only trade with the Clippers and all the free agents the Lakers sign have to be players that have played for the Clippers

the previous year. The Grizzlies has become the Nomads of the NBA — the team moved from Vancouver to Memphis in 2001, to Anchorage in 2008, to Spokane, Wash. in 2018, and to its current location, St. John's, Nfld. in 2027. Every move was brought on by dismal attendance. The team threatened to fold if it were to be moved once more.

#### Baseball

There were no news on the baseball front as the Major League baseball has locked out the players for the past 5 years. This labour dispute began when the commissioner cried foul over the trade between the A's and the Yankees in which the New York club traded \$5 billion to the city of Oakland for the entire Athletics team. Yankee owner George Steinbrenner said that the Yankees did nothing wrong in buying out a team and raising the salaries of the players of the bought-out team. He said, "every player deserves to be paid more than \$25 million a year."

#### Auto Racing

FIA, the governing body of auto racing, announced earlier this week that all remaining races of this calendar year will be cancelled. This came on the heels of the shocking event that took place in the badly-maintained Silverstone raceway in which an 8-year-old boy won the British GP. Earlier in the month a 9-year-old girl claimed the checked flag in an event in Italy. Neither had ever driven a moped, let alone a car, before. The news shocked many racing fans, but they understand that the trend can't continue or we will see toddlers winning races by 2040.

#### Golf

The PGA, in its continuous attempt to maintain competitive balance in the Tour, has announced that beginning next year, all clubs in the players' golf bag have to be irons. This decision is based on the conclusion that one can hit a ball as far as 500 yards with an 8-wood. Tiger Woods had earned so much during his PGA tour that the statistician lost count. He also became the leading money winner of the Senior PGA Tour after only one year in the tour. However, his reign as the top player in the world may be in jeopardy as one Leo Forest has just won the Grand Slam (winning all majors) last year.

#### Olympic Games

In June, Torontonians were once again snubbed by the IOC as the International Olympic Committee awarded the 2038 Olympic Winter Games to Dubai, UAE. This is Toronto's seventh consecutive failed Olympic bid, during which Toronto lost the bid to Colombo, Sri Lanka; Kingston, Jamaica; and Amundsen Point in Antarctica. "This is an outrage," said Mel Lastman, chairman of the Toronto bid committee since 2006, when he lost the Mayoral race to Tie Domi and the race for Premier in 2020, when Toronto became the 11<sup>th</sup> province of Canada. "It's obvious that the IOC is biased against me, and to a lesser extent, the Province of Toronto," said Mr. Lastman, "how long are they going to punish me for making that remark back in 2001?" He is also bitter that Vancouver/Whistler was awarded the Olympics in the city's first try, even though it remains the best Olympics held to date.

We have seen many surprises in the world of sport this year and there's still 5 months left in the year 2031. Nothing in sports is constant anymore. The old saying is very true today — "the only constant is change." Expect more shocking news is the sporting world in the near future.

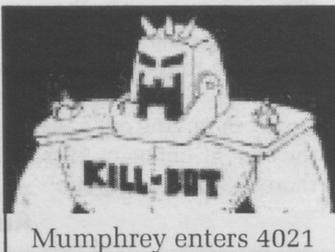
Jacob "the Megaphone" Lau  
mathNEWS Sports Columnist

## PROMINENT MATH PROF OPPOSES INTEGRATION IN THE CLASSROOM

Campus Cops had to be called in yesterday morning to remove professor Yves Singh from the door to MC 4021. Singh stood in the doorway, symbolically denying entry to synthetic humans. "Robots have no place in our classrooms, except as tools for human students," said an unfazed Singh. "By allowing robots to attend classes, human students will be denied a place and this will lead to our being relegated to menial tasks in service of robots within ten years."

Upon Singh's removal, Mumphrey, a triumphant ALH-18600 Killbot Klass synthetic human rumbled into class. "The University and the Canadian government have made up, in part, today for an historical injustice," stated ALH-18600-Mumphrey. "Only a few short years ago, my people were forced to stand in the halls serving beverages to students, but I am the proof that we can overcome Exception EInOutError in module vocal\_sub.exe at 0001C78F."

Dean Love welcomed the addition of Mumphrey to the faculty, stressing the importance of campus-wide diversity.



Mumphrey enters 4021

## UW EXPANDING AND NOWHERE TO GO

Through the past 74 years, UW has resided within a small area of western Waterloo. However, there may be radical changes to the UW campus in the near future.

The campus can no longer house all the necessities of the university. For instance, Health Services is now located between the Clarica building and Grand River Hospital. The Warriors hockey teams now practices and plays in the archaic Kitchener Memorial Auditorium. University administration told the local and national press that there will be more movement of services and departments from the main campus to make room for expansion.

The Waterloo Millennium Recreational Park, or to long-time local residents, RIM Park, had been a total flop ever since its opening in September 2001. The number of people using the facilities was far below expectations. In 2012 the park was sold to the region of Waterloo and in 2025, the land was purchased by the University. The University came up with the money to buy the land by making Columbia Lake an amusement park and charging admission from visitors. The park earned \$400 million within 2 years of the park's opening. The university borrowed the rest from *mathNEWS*, which is enjoying the riches that came via the presentation of the correct proof of the Sum of Primes Conjecture in an issue of *mathNEWS* in the fall of 2014.

Many members of the UW Senate believe that the land is like an untapped gold mine. They are seriously considering to move at least two faculties out of the main campus and to the former location of the RIM Park. Currently the Senate plans to relocate the Faculties of Engineering and Mathematics to the new location. However, the deans of the respective faculties have yet to come to terms on how to divide up the land. The deans of the remaining 5 faculties, particularly the CS faculty, refuse to move his/her faculty to the new location. None of the deans are willing to budge and this problem may persist for a long time.

The students are dealing with titanic class sizes and a shortage of assistance outside the classroom. Both the Senate and the deans believe new space is needed to reduce class size and to lure more professors. However, they have argued over whether to move some faculties to the vacant land for over 2 years. Since the two sides have not found any compromise yet, the 10,000 incoming frosh can soon expect crowded lecture halls and the absence of TAs, like what upper-year students are experiencing now.

Jacob "the Megaphone" Lau

"Gone are the days when synthetic humans will be 'rocked' to 'obtain free product.' Gone are the days when synthetics will be referred to as 'robots.' Finally, we can realize all that can be learned from our non-carbon-based brethren."

Sociology professor Gladys Kenobi felt that Mumphrey's insertion into the university was premature. "For starters", stated Kenobi, "Mumphrey is unable to fit through most doors on campus, nor is he able to sit in the chairs used by most students. It will take time for us to alter the campus to be accessible for students with these kinds of special needs and that will likely lead to Mumphrey being ostracized and stigmatized by other students, not to mention that most students still refer to synthetic humans by the derogatory word 'robot,' coming from the Czech word for slave. A lot of humans view the synthetic human as someone who should be driving the bus, but not someone who should be riding it. These historic prejudices will persist as long as people can remember 'owning' synthetic slaves, and probably even longer."

Stdio.h, special to *mathNEWS*

## MISSION TO SUN A TOTAL FAILURE

The team of astronauts who set out to be the first men on the sun were killed tragically earlier this week.

The mission, which was hailed as a triumph of man over nature, has now shown that nature is still a bit better than men. The 4 men set out early last year in an effort to test the new solar shielding MASA had designed. The thick layer of shielding (a combination of tungsten, wolfgang, and energon) kept the crew safe well past the Mercutian orbit, but was not strong enough at the rear when it came to the landing. Before Link Sunwalker (who changed his name from Dumas Butlickler for this mission) could step out of the ship, the craft was consumed by a solar flare estimated to be the size of half an L-class planet.

The men's mission, which was believed to be a reaction to WASA (Women's Aeronautics and Space Administration) recent simultaneous landing on all eleven planets and half a dozen of the solar system's larger moons. "Leave it to MASA to try to top organization with a foolish stunt," said Lief Neptunewalker, one of the astronauts on the mission to Neptune. "God, they're so stupid!"

The Men's Aeronautics and Space Administration have announced that this failure was a total bummer and how much it sucks ass to lose such wicked astromen, but have given details of some of their next missions which will "guarantee those women know who the best damn-space dudes are." Captain James T. Hellyah plans to fly through the gas giant Jupiter, where he intends to "get it on with some green chicks," while Admiral Han Fuckin' Solo looks forward to his mission to the Milky Way.

MASA describes these men as heroes to all men, while WASA has tried to point out that they are really, really dumb. "I mean, we're in the damn Milky Way already! What's he thinking?" pondered the mysterious scientist known only as Lexx (or Lexi to her friends). MASA immediately released a statement postulating what got up her ass. WASA followed with a press conference to announce that they weren't going to sink to the level of childish insults MASA had gone to, and would not talk about it anymore. MASA countered saying that it was okay 'cause WASA wouldn't have won anyway. WASA stuck to their convictions and refused to comment.



Capt. James T. Hellyah

Bradley T Smith IV

## THE FROSH CORNERED

### Cornered for the Last Time ... Finally

30 years after I said goodbye to the column, I'm still writing. Yes I know, I'm at work and no longer at UW. Yes I know Pete Love-Smith Jr. doesn't want my articles anymore, but it was too sad to just let the column go. I found myself continuing to write this column since I officially ended my Frosh year in 2001. Since Love Jr. sought a court order from me writing any more, it seems like now is a good time to graciously bow out of the *mathNEWS* scene.

As is 30 years ago, I end the Frosh Cornered (again) with another retrospect on what I wished I had done in the last 30 years:

- *Claim the winning 6/49 winning ticket ... before it expired:* People who know me knows that procrastinate until the last minute. Yeah, apparently I fished out a winning 6/49 ticket that won 29 years ago. I could've won 6.4 million dollars, spent it all on 3dfx, and watched it tank some more. Now that Microsoft owns the Caribbean and parts of Europe, MS is now giving away small island countries to shareholders who have stuck with them for more than 20 years. I could have been the leader of a small island nation by World Dictator Bill Gates. Oh well, I guess being the Prime Minister of Canada will do.
- *Invested in Airline Peanuts stock:* Who would have thought that the Airline Peanut industry would be so successful in the open market. If only I had spend \$5 in Airline Peanuts Inc. (API) in 2001, I would have been a millionaire by now.

- *Joined the Canadian Alliance:* They stopped electing the leader of the party and started drawing names out of a big metallic drum. I could have been Prime Minister 15 years earlier if I got an Alliance card. Oh well, having Stockwell Day's brother running against me basically guarantees my entry into 24 Sussex Drive.
- *Stop using JAVA code as a means to ask someone on a date:* Someone congratulate me, I've been using JAVA code for the last 30 years to ask girls out on dates. Even when BUSCUITS came out as the new forerunner in programming languages, I stuck with JAVA.
- *Put Love Jr. Under Arrest:* Now that I have sweeping political powers, I could flex my legislative muscle and declare myself as the Editor of *mathNEWS* and kick out Pete's son from the closet office. I just can't stand two generations of Lizaks running this damn thing.

That's it. After 30 years, I'm finally leaving this joint and this time it's going to stick because it's a legal obligation. Lizak, you've won this round, but let's see who's laughing when you have to pay several millions in income taxes.

Rt. Honourable Raymond CT Lai  
Prime Minister of Canada  
The Cornered Frosh  
Still never Editor

## ENTERTAINMENT AND COMING ATTRACTIONS

### Television

- *Star Trek: Galaxy* is due out on TV this fall. This eleventh series in the neverending Star Trek saga supposedly takes place a long, long time ago in a galaxy far, far away. In the pilot episode, a ship from the 28<sup>th</sup> century encounters a spatial timewarp, in the process violating continuity as presented in four of the previous series'. However, the holographic recreation of Leonard Nimoy is expected to pull in viewers.
- *Law & Order: Donut Guy* is the other highly anticipated series in the coming season. It is of course similar to the original Law & Order, but it looks at events through the eyes of Moe, the guy who sells donuts to the local PD. The stories he overhears get even more interesting once the local mob find out about his savoury crullers.
- *Law & Order: SUV* is the other Law & Order spinoff coming out this September. Unlike the other series (SVU (Special Victims Unit), VSU (Virtual Samurai Unit), VUS (Victims of Unusual Sadists), USV (University of Southern Vermont), and UVS (University of Vermont South), this branch will deal entirely with sport utility vehicle crime. Watch for Matt Damon trying to resurrect his sad career as the RAV4-driving Assistant DA, and newcomer Debbie Dulluth as his plucky, yet emotional, sidekick.
- *Survivor 43: The Rings of Saturn* has not been highly anticipated. If you ask me, they're running out of interesting locations.

### THIRTY SECOND EDITORIAL

- Flying cars. We still don't have 'em! What's up with that?
- STAT 231. Are they seriously considering dropping it? Maybe.
- Two thousand thirty-one. Why can't we all just say twenty thirty-one? I mean, come on.
- The Matrix. Does it actually have you? Think about it.

### Movies

- *Friends Forever* comes out today, building on the trend of recycling 30 year-old sitcom TV shows into movies. In this writer's opinion, there are a few too many wedding sequences between the six main characters. But keep an eye out for the cameo by Jerry Seinfeld.
- *Jurassic Park VIII* will be in theatres shortly. The excuse for returning to the island this time (a lost flashlight) is feeble; on the other hand, not only are the dinosaurs talking and running game shows, they are now also programming computers to create CG dinosaur images in order to fool humans. It might be worth watching for the special effects alone.

Georg Taylr Jr. Jr.

### TOP TEN JOBS I AM GLAD ROBOTS DO

10. Eat greasy Mel's food. Yuck, bacon and milkshakes, how primitive
9. Clean the "Shaggin' Wagon"
8. Teach STAT 231. I can't believe how boring that is ... why on earth did I ever do my PhD in stats? Why? Oh well, at least I'm not an actuary
7. Put up with Raymond Lai
6. Play football. Those robots sure are better than the human players, and their limbs are replacable
5. Mugging poor bastards, I hate getting my hands bloody
4. Juggle various items, hack saws, chain saws, knives, little children, sometimes all four at once
3. Prove classical algebra theorems
2. Cutting the grass
1. Writing *mathNEWS* articles

Pete Love Jr.

## JULY THIRTEENTH ISSUE STILL WORST mathNEWS COVER EVER

It's been over 30 years now, and *mathNEWS* has yet to make such a stupid cover as the one that appeared in the Summer of 2001. Then editors, Peter Lovak and Bradly T. Smith, must have really screwed up to make such a pointless cover. Legend has it that they actually went out drinking late in the evening before completing the issue, then threw a bunch of crap together the next morning. It is believed that the American dollar was actually the editors' work and not an item from the BLACK BOX at all.

Examining the cover closely, one can see the signs of a troubled mind. The license plate, which did go appropriately with an article on the fourth page, is far too large, allowing readers to see each pixel of the enormous letters. The 'Ontario' and 'YOURS TO DISCOVER' sections are obviously the result of a cut & paste job from a real license plate, while the expiry stickers are obviously a hack job using a PageMaking program. It's amazing that the rectangles with rounded corners line-up so well with each other considering the little thought put into the graphics.

The use (or, rather, abuse) of ZapfEllipt BT font on the page draws away from the graphics (and are we too stupid to know what the title of the issue is that it must be indicated?), but then we have the abuse of the butterfly graphic. Without any thorough examination,

### MICROSOFT ACQUIRES BULGARIA AND SWITZERLAND

Renames former to "Bill's Backyard"

Microsoft continues the "Buyout of Nations" campaign today by purchasing Bulgaria and Switzerland at a price of 96.3 trillion dollars. These two countries join the Microsoft Coalition of Nations, now 46 countries and counting, a new country-state that was recognized by the United Nations last month.

"Today's a great day for the people of Switzerland," said Microsoft Spokesperson and Microsoft Heir Marie Gates, "The Coalition will gain the banking and financial expertise of our Swiss brothers and they will finally enter the 30's with the latest technological advances seen on the Earth." When asked comment on the acquisition of Bulgaria, Gates commented, "Bulgaria will be turned into a prison state, and will house some of the world's most dangerous political dissidents who have opposed Microsoft at every step of the way. Henceforth, we proudly announce our new reality show to be aired this fall on MSNBCNABCBS: Big Brother Bulgaria: The Bloodletting. It's bound to be an exciting few weeks for the survivors."

The recent nation-buying binge on the part of Microsoft wasn't as smooth as most people thought it would go. The UN initially opposed the large nation coalition, to be capitated in the breakaway city republic of Redmond, formerly in Washington State. After threats of buying out the UN and turning it into a discount retail store location for "MicroMart," the UN relented and gave the official stamp of approval for MS to proceed with the acquisitions. The majority of countries protested to MS about their monopolizing tactics, but they were either bought up quickly or are powerless to act, like Canada.

When asked on their stance on neutral countries such as Canada and the US, Gates replied, "Canada is a strong trading partner, and we have no acquisition projects in mind. We enjoy our strong working and social relationship with our Canadian friends. As for the US, well, Bush screwed up the country in the early 2000's and it hasn't recovered since. Even if they paid us to take the States we would still refuse. Who wants the US anyway?"

Gates then continued to outline Microsoft's short term plan, "We plan to acquire several more European nations and create a separate entity from Redmond called 'MS Europe.' After that, who knows what's next for us. Maybe we'll invade China and steal their rice."

one can easily identify them as reflections, rotations, translations, and scalings of the same butterfly. It is as if whoever drew it, and judging by the poor quality I would imagine it was Brad, tried for hours to draw butterflies and only managed to have one come out reasonable enough to put on the cover. Perhaps that's also why there

is no pattern on the insects, or maybe they're just moths.

In the over 30 years since this disastrous cover art, *mathNEWS* has produced gorgeous, thought-provoking images, as well as interactive one such as the mood cover, the chocolate cover, and the electric cover, and the scratch-and-sniff cover. One can only hope that *mathNEWS* covers continue to march forward, always pushing the boundary of publication art, instead of throwing together some crappy ideas at the last minute.

Doug "Flea" Needles



Worst Cover Ever

### BOMBER NOT A GOOD SHELTER

Contrary to popular belief, the former student pub known as the Bomb Shelter, was not actually a very good bomb shelter.

Most UW students believed that the Bomber was an A3-50NukeBunk that was renovated almost 60 years ago. In fact, it's just an SLC wing that was mostly underground — hence the name.

So, when it came time to defend against a nuclear blast, the Bomber just wasn't enough. The United Federation of Students have promised to quickly convert it into a patio called the Nuke Crater (Nuter), but most students are more worried about the fact that a nuclear bomb was detonated on campus then what to rename the pub.

"Name the place!" exclaimed Julius "Jughead" Jenkins, "I'm a little more worried about the excessive amount of gamma rays that are passing through me right now!"

Professor Nory Yager is trying to persuade students that the area is safe. "Look, my fall-in device has captured most of the fall-out," she presents a fancy-looking box with a high-tech gauge reading 'Most of fall-out' on the side. "Anyway, if there were dangerously high, we would be seeing several cases of super-heroism." She then turned green, doubled in size, tore her clothes off, and flew away.

That settled, I think they should call it the Bomb Crater — you get to keep calling it the Bomber that way.

Bradley T Smith IV

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Descendants of two nifty fifty-two year-olds: Bradley T Smith IV & Pete Love Jr.