

ELECTIONS

The MathSOC elections are officially over (because it's Friday when you are reading this). However, since it is really Tuesday night, I have no idea how they turned out. The seats being contested were (are??) 1A 4 stream and 3B. The following students were acclaimed in their respective classes.

- 1A Stream 8 --- Martin LaFrance
Monica Oke
Sean Romenco
- 2B --- Tim Hill
Ross Morrissey
James Puttick

You are being challenged by the Canadian Intramural Recreation Association (CIRA)!

To promote Canadian fitness, CIRA challenges YOU to participate in any strenuous physical activity for at least 15 minutes, 3 times a week, throughout the month of October. All those who are interested should drop by the intramural/recreation office in the PAC to register and obtain their personal activity calendar. It's easy! So take on this challenge and get active!

OPEN HOUSE '82

Yes kids, this is it...it's time once again for Open House. But... this is no ordinary Open House...this is the 25th ANNIVERSARY OPEN HOUSE!!

Many of you (...or less than many of you ...-ed.) may even be interested in attending to see the displays and demonstrations given by your favorite prof. (this means possible Brownie Points!!)

You, too, can help out -- WOW...More BP's -- Now, you are probably asking, "When is this great event, Don Pardo??"... Well, it's October 23 and 24 (Sat. and Sun.).... Well, now you're probably wondering, "Gosh Don, what can I do to help??".... You can sign up on the list of volunteers on the door of the MathSOC office (that's MC 3038).

Finally, you are probably just dying to find out, "What else can I win, Don??" Well, I've been informed by uninformed sources that some sort of remuneration (not cash) will be provided for "volunteers".

So, in the words of the late, great John Belushi.....DO IT!!

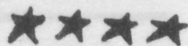
Don Carter

*DAVE,
DON'T
FORGET
TO PUT
SOMETHING
HERE!!
I CAN'T...
THERE'S ALREADY
SOMETHING
HERE!!*

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FINALLY! EDITION



Volume Thirty Number Two
Friday, October 15, 1982

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NSERC POSTGRADUATE SCHOLARSHIPS

The Natural and Engineering Research Council (NSERC) Postgraduate Scholarships and Ontario Graduate Scholarships are currently available. You must apply through a department...try the department from which you get the best grades for joint programs (or both)...

The Department offices for picking up the forms are:

- Applied Math MC 5002
- C & O MC 6139
- Computer Science MC 5181
- Pure Math MC 5067
- Stats and Act. Sci. MC 5037 or 5038

Do it this week!! Applications deadlines are set by department for the week of October 18 - 22.

Profound Saying of the Week

Stockmayer's Theorem:
If it looks easy, it's tough.
If it looks tough, it's damn well impossible.

Congratulations ... MathSoc, on behalf of all the Frosh who attended a very successful Casino Night, will donate the sum of \$250.00 to the Federated Appeal. Thanks go to Rob Dreyer (event organizer), Tim Hill, and Steve Hagar for their help in getting this event off the ground.

Joe Geremia
MathSoc Treasurer

ODE TO SCOTT THE FROSH

Time was running out.... Scott knew he could not hide much longer from facing up to his highly untruthful and tactless article entitled "Personal Interviews with the Fall '82 Math Executive" (mathNEWS...1 Oct 82). It was Friday night and Scott was scrounging the countryside (Sunnydale) trying to pick up an elementary school type...or at least a sheepless Engine-queer. After repeated rejection and physical abuse (from the elementary school types, of course), Scott retreated to the sanctuary of one of Karen's famous parties.

Carrying a cooler of some "lady-drink" concoction, Scott figured he could hide in the corner of the room for the rest of the night in relative safety. Suddenlylike a gust of shivering northern wind, the door swung open. Inside stepped a tall, dominating figure thundering "JEREMIAH JOE IS THE NAME... AND CAPS IS MY GAME!! ANY FOOL HERE WANT TO PLAY CAPS??"

Well, a quick look around the room revealed fear and terror in the eyes of everyone there. Unexpectedly, a spastic figure emerged from a dark corner of the room, tripping over his clumsy feet...all the while whimpering "Yah, I think I'm qualified to play."

Well, Jeremiah Joe...they call him "Giuseppe"... looked down at young Scott and laughed. The crowd parted and the two opponents sat down to business. The hand of experience showed itself quickly, as Joe hit off with a couple of doubles and a triple. (That's 3 in a

row, dummies!!) Scott was sucking back that baby-juice of his at an incredible rate.

Shockingly, Joe sat back and intentionally limited his point scoring allowing the Frosh to score 4 points. The score was 10-4 for the Big Guy...but the foolish Frosh would not quit. Asking for loser's option, Scott extended the game to 15.

The score was soon 15-5.

Scott's eyes were now rather glassy as he continued his frequent trips to the washroom. (Typical Frosh -ed.) On his return from one of these journeys, Joe challenged Scott to extend the game to 20...on the condition that Scott was allowed 2 shots for every shot of Joe's. Silly Frosh accepted the challenge.

Scott took 2 shots, both missing. Joe replied with an incredible 5 successful shots in a row. The crowd was ecstatic as Jeremiah Joe proved victorious.

As for our now famous Frosh, he was last seen "fertilizing" (if you know what I mean...) someone's lawn. Ah, the sweet smell of revenge!!

Joe Geremia

P.S. This story is verified to be true...unlike some articles we've seen!! (After all, I'm an accountable kind of guy!!)

Charity Raffle

The Student Villages are holding their annual Charity Raffle. The first prize is a return trip for one, anywhere Air Canada flies.

The second prize is a Royal Doulton 45-piece dinner set. The third prize is a Goldstar pinball machine. The fourth prize is a \$200 grab-bag.

The tickets are \$1 each or 6 for \$5. The draw will be held at the Student Village 3rd Annual Benefit Semi-formal, November 26th, 1982. The proceeds will go to the Rotary Children's Centre.

The tickets are available from Mathsoc office (MC 3038). The Benefit Semi-formal is open to all students. In past years the semi has been very successful. The Mathsoc office has tickets for this event, so don't miss it!!



Quiet Desperation

Most writers lead a life of quiet desperation. It's hard to write a column before your last entry has even been published. Before completing this column, I will either have a topic or have half of a page of blatant filler.

That could be an idea!! (-possibly your first- Ed.) Have we ever done a column on the uses of blatant filler? No, that's more of interest (or disinterest...Ed.) to the entire readership, and this is a frosh column. Who knows, if you turn the page, then there may be a column on blatant filler. (-or a column OF blatant filler -Dr. Kurrap)

I have been told by Dr. Q. Pluribus Kurrap Ph.D., L.L.B., Q.C., C.O.D., C.B.C., T.W.I.T., P.E.I., (M-O-U-S-E ...ED.) that I left an item of great importance off my list of suggested activities in the last issue. The Professor strongly recommends that the students make an attempt to take notes during class. Dr. Kurrap, who teaches at Mc-Mathter Un-iversity, feels that, first of all, they should attend class. Being a professional student, I reprint those suggestions here.

I've noticed that a large number of Mathie frosh are in residence. Thanks to Food Services, I now eat at the Coffee & Doughnut Stand on the third floor of THE building...you know, the home of WIDJET. This stand serves about the only food on campus that is not under the control of Food Services. The food is quite good, and the prices are superb. It's a place to take full advantage of if you are on a limited budget and still like good food.

As to WIDJET, I have heard and ask the administration to confirm or deny that WIDJET is in its last year. Rumour has it that microcomputers emulating terminals will replace the last two rooms of WIDJET terminals by Fall '83 with the same range of features as the new IBM PC's and the SuperPET's (...that's SuperPITS to anyone who has had the dubious pleasure of (ab)using them...Ed (or StuporPETS for the person who has to tutor the courses using them--WJJ (I have returned!)).) Who knows, the elimination of the need to monitor WIDJET may shorten the time to interact between the central computers and the micros. Now if only Mathies could have access to the CP/M.....

The last item has to do with the recent proposal for limiting the number of CS courses offered. This involves requiring all frosh wanting to take their studies in some field where CS is a major to be admitted to the program at the start of the second year on the basis of their first year marks. This

Questionnaire

Greetings fellow Math-people:

As many of you might or might not know, Mathsoc underwent a major house cleaning of all senior executive last winter (let's face it, the shareholders were getting mighty pissed off!). We, the not-so-new-anymore executive, feel that the image of Mathsoc has improved substantially (just ask any frosh!) and a lot more people are now involved. For those of you who do not feel this way, you are probably either members of the old regime, or you just don't care - in which case you probably won't even bother to fill out the exciting, intriguing questionnaire contained in this article. To the rest of you, I put forth the suggestions in this questionnaire which could make your remaining years in the M & C more bearable (sorry 4th years - you've already served most of your sentence - of course, there is always graduate work...FUN.. WOW!!).

More to the point, a group of imaginative, creative, concerned, enthusiastic, and--hey--all around great people (picked by me, of course) have come together to determine what could be done to improve the overall Faculty of Math. We amassed a list of ideas which we believe can make life at Waterloo a lot more rewarding. This does not imply the list is all-encompassing and we are still open to any new ideas you might have. The following questionnaire is designed to tell us what you would most like to see changed in our faculty. Without your feedback, it will not be possible to implement any of our ideas.

There is no guarantee that any of these ideas will be implemented. However, if the money were to become available, this questionnaire would tell us where you would like it to be spent.

When you have finished the questionnaire, please return it to the Mathsoc office or the mathNEWS mailbox. Thanks.

policy has been developed in light of a fifty percent increase in student-courses of CS over the past two years. The Department of Computer Services has outlined clearly its predicament and, in essence, has its back to the wall. When the policy is finally enunciated, mathNEWS will carry the details which are of concern to all of us.

Scooter!

QUESTIONNAIRE

Name :
 I.D. :
 Term :

1. Rank in order of preference the following general suggestions. (Number 1 being the most preferable.)

QUALITY OF EDUCATION FUND

RANK :

A financial pool to maintain and improve the academic resources of the Math Faculty.

FORMAL STUDENT-FACULTY AWARDS DINNER

RANK :

Periodic dinner to honour the outstanding students and faculty members in all areas of University Life. (Sorry...no awards for best CAPS player !!)

RENOVATION OF LOUNGES

RANK :

Improve physical appearance and serviceability of lounges to be more functional for student needs.

LECTURES BY PROFESSIONAL PEOPLE

RANK :

A chance for students (mainly regular) to gain insight into mathematical applications in the corporate world.

COFFEE & DOUGHNUT STAND

RANK :

Upgrade the present services offered by the third floor cafeteria facilities

2. DO YOU HAVE ANY SUGGESTIONS OF YOUR OWN ?? (Indicate where in the above list you would place these suggestions....example... between 1 and 2)

UN-CLASSIFIED ADS

THE NEW IMPROVED WEIGHI WAICHERS' CLINIC

For a short time, we are offering a radically new treatment!! For a small fee we'll lower you (by a spring scale) towards a black hole.

When (if) you return, you'll be amazed to discover that you've lost literally tons of ugly fat!!

Still not convinced?? We are proud to announce that not one customer has returned dissatisfied!! SO SIGN UP TODAY!!

This offer will self-destruct in 10 seconds....(I told you it was for a short time!!)

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mathNEWS
 MC 307
 University of Waterloo
 200 University Avenue West
 Waterloo, Ontario
 N2L 3G1

3. THE FOLLOWING CATEGORIES ARE DESIGNED TO GIVE US SOME FEEDBACK AS TO HOW THESE SUGGESTIONS COULD BE IMPLEMENTED.

FOR AGAINST DON'T CARE

QUALITY OF EDUCATION FUND

- a) Financial awards for excellence in teaching
- b) Help purchase new equipment for CS labs
- c) OTHER

AWARDS DINNER

- a) Award outstanding students-faculty on academic basis
- b) Award outstanding students-faculty for major contributions
- c) Recreational awards for Mathletic teams
- d) Awards for student-faculty competitions
- e) OTHER

RENOVATE LOUNGES

- a) Reconstruct the lounges into one room for group study purpose....NO C & D
- b) Divide the room into a study lounge and social lounge
- c) Set up a licenced area operated on a limited basis
- d) Improve the furniture making it more comfortable
- e) OTHER

LECTURES

- a) Provide money for professionals to teach lectures...
- b) Invite guest lecturers into classes
- c) Give money to CSC to get more CS specialists as visitors.
- d) OTHER

C & D STAND

- a) Increase the quality and selection of the food
- b) Build a permanent structure for the C & D
- c) Which of the following lounges should have smoking ?
 Food Area Study Area Neither Both

- d) OTHER

Steve (DEVO) Wolfe

Hey, mathNEWS!

On page 4, the reason MathSoc lost the ballgame is that no pitches were thrown to them that they could hit, because the Faculty didn't have a pitcher. Was this a misprint, or what?

A. Jerk

(sex) and the Single-Valued Function

No doubt you are familiar with integration. - You're not?? This is an integral sign. ---->

Anything which starts with one of these amusing squiggles is called an integral. Maybe you know about differentiation. That's good. Simply put, the integration operation is the reverse of the differentiation operator.

This puts us in a nice position to introduce some function theory. Many mathematicians (the lazy ones) use a big D to mean differentiation. It is certainly true that differentiation of a function is a function. Given any function, there is one and only one function which is its first derivative at all points where the original function is differentiable. (Mathematicians like to write differentiable as *diffe*. Apparently this is a cute sound.) It is also true that differentiation is the inverse of integration, since if you integrate an integrable function and then take its derivative, you get the same thing back again, at least at those points where the original function was continuous. But, curiously, and this is a concept that has driven men to drink (or enroll in Integrated Studies), integration is not the inverse of differentiation, because integration is not a Single-Valued Function.

This seems odd. We always think of integration as a function (it's really

an operation), but for any integrable function $f(x)$ there are uncountably many functions $F(x)$ whose derivatives are $f(x)$. In fact, this outlines a rather stupid proof that the set of all differentiable functions is uncountable, but we'll ignore that. Which brings me back to the title of this article. The integral of $\exp(x)$ with respect to x is usually written as $\exp(x) + c$, where c is some piddling constant (aren't they all). The integral of THAT is then $\exp(x) + cx + c'$, where c' is an even more piddling constant. Continuing in this way, we outline a rather stupid way of generating all functions of the form $\exp(x) + p(x)$, where p is a polynomial in x . Consider the polynomial $p(x) = \sum (x^i / i!)$, where the sum is over all non-negative integers i . This is the Taylor series for $\exp(x)$ about $x = 0$, and converges for all real x . What we said earlier was that if we differentiated $\exp(x) + p(x)$ enough times, we'd get $\exp(x)$. But here, $\exp(x) + p(x) = \exp(x) + \exp(x) = 2\exp(x)$, whose derivatives are all $2\exp(x)$. What a bummer! All this means is that you can't integrate infinitely many times and then differentiate infinitely many times and hope to get back to where you started. But you should be able to do that, since differentiation is the inverse of integration, right? This is unnerving.

More coming... to be continued.

Ross Brown

Clarifications to Quiet Desperation

Well, I goofed. First of all, I apologize to Rob Hildred, a mere engineer, who suffered from a misprinted telephone number. His roommate, a Mathie, reported that of the six calls Mr. Hildred answered, none were by women. Okay, guys, pay attention. I clearly asked ladies to call, and only an Artsie could be so stupid as to know his gender (sic).

As to extra-curricular activities, there appears to be some confusion as to what was meant. I was going by a schedule I had set out during orientation week which listed such items as meals, sleep, mindless activities, partying, solemn prayer (I'm quite religious in my own way), practical jokes, television, showers, shopping, and also little things such as assignments, lectures, and extra-curricular activities. All my leisure time comes to about thirty hours, divided among shopping, partying, television, practical jokes, and extra-curricular activities. I consider extra-curricular activities as being a member of a club or society such as mathNEWS, the Chinese Catholic Fellowship, or the KKK. You could waste a

Dear Editor:

A question of terminology: if a polynomial of degree 3 is a cubic, and a polynomial of degree 4 is a quartic, would a polynomial of degree 6 be a hec-tic?

Sincerely yours,
Confused

great deal of time on something useless such as mathNEWS, leaving yourself short when it comes to assignments. What I was trying to say when I suggested a three hour time limit was: "Don't get involved in too much until you get accustomed to the workload of University." I have already erred in that field.

Lastly, I aroused some ire from various departments on the campus in general in my statement that sharing ideas was legal. It's legal in the manner of discussing assignments to develop an idea to solve a problem. It's not legal if you photocopy someone else's assignment and submit it as your own. Sharing ideas is allowed, copying isn't.

Scoter!

More Zoology

Disclaimer: any resemblance of these creatures to any real creature, dead or alive, is purely intentional.

After the overwhelming response from the last set of descriptions of wildlife found on campus, we thought we'd take another stab at it.

Football player
(magnus dopus)

Usually stands about 6'1" and weighs about 400 pounds. Can move amazingly quickly when given an oblong bladder called a "football". Bands together in groups of 11 to defend territory 25 yards long, leaving the opposition a 110 yard long "buffer zone". Can count, but only in multiples of seven.

Villager
(suckerum suckerum)

A common sight on campus, especially in the vicinity of Villages 1 and 2. Generally only a phase students go through on their way to a degree. Characteristics include a liking for rocket fuel, beer and anything that contains alcohol, and a cast-iron stomach (made by Clemmer Industries) for handling the food. Usually seen partying Thursday morning till Wednesday night.

Kampus Kop
(towingcompanii kickbackus)

Recognized by their big black car, green uniforms and highly conspicuous antiquated communications device. Also comes equipped with book of parking tickets for when Active Towing has made their weekly quota of removals. Generally believes that if you can't see it, it can't see you, and will go about its merry way. Docile, mostly harmless.

Artsie
(liberalus artsii)

A generic term applied to an entire collection of beings not enrolled in the faculty of Math. Various species include the psych major, political sci-

tists, drama students and many more. There are as many kinds of artsies as fungi. Have to wear t-shirts telling them how to pronounce their generic name. Usually seen, but not much else.

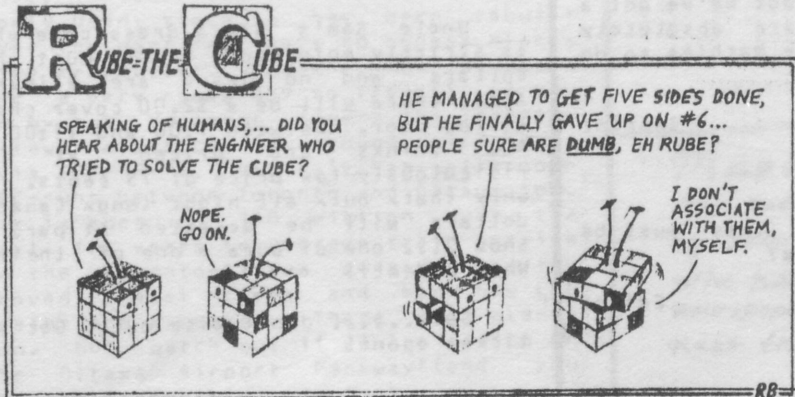
Federation of Students President
(wim simonis)

An incredible being driven by sheer power-hunger. Closely related to the umber hulk, a beast which confuses its enemies. Generally elected after confusing opponents during campaign in February, and goes into a dormant state from March until the campaign begins again. Can be found driving from university to university in rented car at Federation expense.

mathNEWS editor
(whatdoi donextguys)

An inexperienced, red-haired, creature who attempts to put together an newspaper. At least, that's what it looks like this term. You see, this creature metamorphosizes at least once a term. The previous form the editor took was a brown-haired, grey-eyed, unshaven weary nervous wreck (now you know why they change form so often). The editor before that was a tall, long-haired Avenger player, and before that there was...enough physical descriptions. These creatures have been in existence for ten years, and are a rapidly dying species. Often spend long sessions at keyboards, waiting for the printout, cutting up the printout and pasting the pieces down. Best known for supervisal of the above activities, however. After a marathon session, the creature must wake up three hours later to take his efforts to the unknown territory known only as Graphic Services. He then goes back to sleep for two days, after which he returns to GS to get boxes of pre-printed bird cage liners called mathNEWS. Approach with caution Wednesday mornings. Also approach with caution on Tuesday evenings--you may find yourself trapped.

orange, not



STUDENT ADVISORY COUNCIL

As outlined in the terms of reference, the Student Advisory Council is the committee on campus which allows student input into the affairs of the co-operative system.

Each faculty has members which represent their fellow students by giving input into the topics under discussion. The Math Faculty is supposed to have three members on the council but at present has none.

The council meets every second Tuesday at 4:30 in Room 1029 on Needles Hall. The next meetings are scheduled for 12 October and 19 October (...does this sound like every second Tuesday to you?...ed.). The meetings last approximately one hour.

If you are interested in joining the council, please attend either (or both) of these meetings. Any further questions can be directed to MathSoc prez, Steve Lightstone, or to the Chairperson of the S.A.C., Reg Thomas (884-7242)

feedback!

Dear Editor,

How could you have left out so much in your last issue? There was virtually no blatant filler, no Dear Alex, no Song of the Week, nothing worth reading. All that you had was an unbalanced budget, an Engineering calundir with MathSoc activities written on it (who else would know that Engineering classes start on Oktober 25?), and a letter from the Chevron Club. The artistry in the layout of pages 11 and 12 was lost in the banality of the articles encased therein. (And the masthead was a tenth its normal size! -ed) Keep up the good work.

The 2 am Layout Staff

Dear Editor,

Sorry to bother you, but we've got a few staff members who are absolutely useless. They say they are Mathies so do you want them?

Imprint

Dear Mr. Imprint,

If they're useless, they must be engineers. Who'd want them?

Editor

AM 2 THE AD



AUGHHHHHHHH !!!! I've had enough of little black lines and tape and WJJ winning 10 chips or 40 dollars or something like that..... DWTill spends his time doing Cs340 and layout xxx and not necessarily in this order.....

Monica Oke...(nice option!!) ...is supposed to be studying for proveitIdon'tevenknowwhatitmeans (read Algebra 134).... I'm supposed to be xxx writing an essay for tomorrow...HELLLLLLPPPPPP What else can I say.....Apologies to Connie Walker, Sean Romenco and Jen Gray for forgetting their names last issue....a million apologies!! Thanks to Ross (no W) Brown, WJJ,DaveTill,Monica Oke, Steve Wolfe, Jan Gray, Steve Lightstone, Jon Geremia, Scooter!, Don (call me PARDO) Carter, anyone who ate my pizza....(Glenna for being here in spirit...) Wayne Dave xxx for election stuff.....

I FORGET JAMES PATTICK AND JANE

ROBERTS!!

So what else xxx can I ramble on about..... Perhaps I can start my essay here.....

MOST EDITORS LEAD A LIFE OF QUIET DESPARATION SO DO I.....GOOD NIGHT.....

SO HERE'S TO MIDTERMS , AND THANKSGIVING AND MY DAMN PHONE BILL!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!! HOW XXX MUCH MORE TO GO.....NONE.....DAVE

UNCLE SAM'S TO BE INVADED BY HORDES OF MATHIES

In a late breaking news story, mathNEWS has been informed that the buses are getting ready for the biggest evacuation since Mississauga. Hundreds of thousands of hard-working Math students (and others....what else is there?? -ed) are readying themselves for the biggest and best party of the term.

That's right ... MathSOC has done it again. At 6:00 pm, on October 22, the buses will be leaving from behind the Math building. After a wild night of intense partying, they will leave Buffalo at 3:00 am and arrive back here by about 6:00 the next morning. The cost will be \$11.00 and tickets will be available at the MathSOC office (MC 3038) starting today (I hope).

Uncle Sam's has a dress code which is strictly enforced. Shirts must have collars and no jeans are allowed!! Also, there will be a \$2.00 cover charge at the door. Between 9:00 and 11:00 pm, ALL drinks are priced at the ridiculously low price of 75 cents. Not only that, but, all night long, Canadian dollars will be accepted at par. You know one of ours = one of theirs!! What a deal!!

So..... don't miss out. Get your ticket soon!!