## B. Math or B.M.Sc.

## FACULTY OF MATHEMATICAL SCIENCES?

At the January 15 meeting of the Mathematics Faculty Council, the following motion was passed: 'that we approve the proposed changes in the name of our degrees to: Faculty of Mathematical Sciences, Bachelor of Mathematical Sciences and ilaster of Mathematical Sciences,and that, with a view to meeting problems which might arise in connection with such changes, our Dean be asked to initiate formal consultation with other faculties.' The motion was strongly supported and, in fact, was carriedwithout discussion or opposition. Faculty Council secretary Professor P.J. Ponzo noted surprise at this lack of debate considering the long discussions heard about a year ago when a similar proposal was made.

The main contention of those pushing the change seems to be, in the words of Applied Math Professor I.J. McGee, who brought the motion before Faculty Council, "to more accurately reflect what is going
on in this faculty." Reiterates Professor Ponzo, the change of name "is warranted considering the broad spectrum of things being done in this faculty." R. A. Staal. Pure llath Department and a math senate rep, is responsible for initiating the move. He notes that of the five math departments-Pure Math, Statistics, Applied Analysis and Computer Science, Applied liath and Combinatorics and optimization--only the field of Pure Math falls comfortablv under the label "math" whereas all five go well with the banner "Mathematical sciences". Proponents of the move also mention the gradual changes in the faculty core courses that are being made and this resulting deviance from traditional mathematics lends further support to the movement. Adds Dr. Staal. "such a change would mean a more flexible curriculum without confusion."

About a year ago a similar move was made by Faculty Council. From there the (cont'd on pape 9 )


## family sandwiches EXPAND SERVICE

Starting this week, Coffee and Donuts is trying something new. They have two suppliers of kaisers. The story behind this is that two weeks ago one of the Security Guards at the University approached the adninistration of $C$ \& $D$ offering new improved kaisers and Family Sandwiches (subs). The response to these new kaisers was overwhelming, as they sold out by 12:15 every day last week.

Meanwhile, Mr. Bingeman, the owner of Kitchener Dairies, got a little worried as he had lost two large customers in two weeks (the other being the Plummers), and hurried over to the University to try to get his business back.

As a result, for this week and next, both Kitchener Dairies and the Security Man are supplying the food. It would be kindly appreciated if the people who eat the food would voice their opinions.

Also, Coffee and Donuts has announced a new service. They are providing two types of soup--French onion and chicken-and hot chocolate. These new additions cost 10¢ each.

## MATHWEEK

A few events still remain in mathsoc's version of math week for this term.

All afternoon today, friday, there will be a free pub in the Campus Centre pub area. Kay Materick entertains. Tonight, again in the Campus Centre, Mackenzie will be playing. Admission for this pub is 25 c for mathies and 75 \& for Federation members. Tomorrow evening the semi-formal, "Pink Ambrosia" will transpire at the Valhalla Inn Ballroom. There will be (cont'd on next nage)

## ELSEWHEN

Fragments from mathiseus' files, Thursday February 1, 1973, one year ago this week. "...Co-op teaching: 65 hopefuls, 40 jobs..."; "...the Water Melon Cauliy flower Dough: This is part 1 (of 9) of an inspirational novel by Gerhardt van Schplumfptk..."; "...the computer science prof, who has been given the boot is William Wadge, who currently lectures Math 129(2 sections) and llath 472B. lie recently revealed all in another exclusive mathtIENS interview..."
(Mathweek-cont'd from nage 1) dining and dancing to the Don Pond Show. The bar opens at 6 pm with dinner to be served at 7 pm . Tickets are $\$ 7$ per couple, available at mathsoc (MC3038).

Sunday afternoon will feature the tobboggan races. There will be transportation provided with buses to leave the math building at noon.

Drinking, dancing, dining and sliding all remain, as this weekend wraps up math week for another term.

## sound off <br> \$\$\$\$\$\$\$\$\$\$\$\$\$\$.\&4

Ever wonder where that $\$ 624$ or so in tuition fees go, that you fork out to 'buy' your degree. Well, 12,000 of 'you' make almost 7 and a half milliun dollars. The Provincial Government adds about another $\$ 34.7$ million. of this - 44 million dollars - would you belleve that salaries and benefits for those salaries will rip out $79.63 \%$ or an incredible 35.5 MILLION DULLARS.

If this fails to be shocking, consider:

1 The above amount is only an estimate. The final salary increases are yet to be decided. Granted the figure above includes an allowance for salary increases BUT last year the allowance fell about $2 \%$ short of the actual increase. This was only $1 / 2 \mathrm{milli}$ on dollars. 2 The percentage spent on salaries has been spiralling upwards. $5.5 \%$ in 5 years!

3 The Provincial Government grant increases to the university is about 3\% less than the real increases in salaries. McLaughlin has recently released a report indicating that if present trends continue, in 1983, only 9 budget years away, $100 \%$ of the university's income will be spent on salaries and benefits. That means computers, no new books, no nothing.

Realistically this will not happen. But what must we do to avoid this? The sub-committee in 30 pages manages to say that either the Provincial Government must give us more money or the university must do something. The first idea is pure hope. Late last year, the closely knit group of university presidents and colleagues, 'cJu'. recommended to the government a $10 \%$ increase in the formula financing. This increase in the formula financing, This request was so ridiculous that it is rumoured that Jack llchie laughed for a week. llore seriously, informed sources close to the government disclose an increase of $5.4 \%$. So again salary increases will far exceed increased income. This hurts everybody, but students the most.

There is one possibility. Salary increases, both merit and across the board, must not exceed government increases. We as students must express this to those in the decision-making process. This writer
does not advocate disruptive tactics, but rester responsible pressure. What does this mean? Talk to your prof, or better still, mail this article to Dean Forbes or Dr. Matthews. Remember, an unmentioned alternative could be a dramatic tuition increase!

## REWARD AWARDED

Last week's plea for past copies of mathivell was met with several responses. For being the first person to submit issue 2.2, Glynn Linnard, 3A Math, receives his choice of either a free math T-shirt (\$2.50 value) or $\$ 2.50$ worth of coffee and donuts from the C\&D stand. For submitting other requested issues he receives an additional $\$ 1.00$, also to be spent at the C\&D stand. Norm Macdonald is the other winner as he too gets a $\$ 1.00$ certificate. mathidEWS thanks you for your response.

## moTHeatre BUSTER \& CHARLIE

The next fare of mathsoc's matheatre will be two silent films. Next Tuesday, February 5, Charlie Chaplin's 'llight at the Show will play at 1:30 pm to be followed at 2:00 by "The Railrodder" starring Buster Keaton. The movies will be shown in MaC 2065 and, there will be no admission charge.

Elger Fropwith sez: why wait til spring? Do it NOW! fer egsampul come awn aut an' join mathNEWS

## FULLDUPLEX by ludwig van zopfault

Professor Garrett Birkhoff of liarvard University was on campus this weel: to speak about several aspects of Mathenatics and Computer Science. Prof. Birkhoff is a prolific author and a highly esteered teacner and is well-known to liatinernatics educators for nis algebra text. A Survey of liogern Algeura (with S. liclean), which. in the words of one admirer. "revolutionized the teaching of University llathematics".

On lionday and Tuesday, the Professor rave two general interest lectures on the subjects of "Algeira in 1974" and "liathematics and Computer Science". We were unavie to attend the first talk, but fortunately did not miss the second. Professor Birkhoff is an extremely entertaining speaker, and has a great deal of interest to say to every Matheriatics student at this university. and in particular to those of us in Computer Science.

Compusci students at Waterloo have always complained that they shouldn't have to learn a lot of liathematics whlch will "never ie of any use to theril" (or so they say). In the past. tne faculty has managed not to give in to the grumblings of the students, at least not until last year. wnen it was decided that a third year halfcourse in Hurnerical Algeora could be subsitituted for liatin 332 a (Theory of Functions of a Real Variable). At the time. this loove was taken by this writer to incicate a weakening in the Faculty's stance that a liathematics program should be just that, and that students should not have the alternative of taking a computer science prosran with a little algebra thrown in for culour. This move on the part of the faculty was greeted with wholehearted approval by the students of AAâCS, apparently since most of ther don't like Analysis, and would rather do Computer Science. Any objection that there may have ween to this change in programs never surtaced. and so the departrient of AA\&CS startea to cirift away from the mainstream (wnatever that means) of Mathematics.

That this view of Computer Science as somehow veing different from the rest of llathematics is somehow inappropriate was urousht lome wy professor tirkhoff's lecture on Tuesday, in which we learned that nistorically there has always ween a close connection vetween liathematicians and Computer Scientists. Through illustrations drawn from ivurierical Analysis, coding theory, and automata theory. Prof. Birkhoff showed that the comulnation of liathematics and Computer Science has served to advance neople's knowledge where specialists in one field or tile other had failed.

We nope that, for those who attended, Prof. Birkhotf's lecture has allowed them to see the relationships between liatnenatics and Computer Science in a new light, and for those who were unaule to
attend. we hope that in the near future there will Le another chance to hear this remarkaule man speak.

## short (unsolicited) plug

It is with great pleasure that we note the return of the Black Bubvle Coffee House. The black bubule (so called because of the wall nanging, in the Engineering IV lounge where it is held every Tuesday nignt) was started last summer by a group of people who were fed up witn the meatmarket atmosphere of Federation puis. The Black Bubule offers free entertainment. cheap coffee, honie baking. and companionship. Uur only regret is that it is neld on Tuesday nights when matholds is veing put together.

The MATlisoc chess tournament wound up on Tuesday, with A. Cheron coming out the winner. The Compusci Club's chess program played an astounding match. winning one same (uy detault)" and drawing two more. This was good enough to tarn the proirram 10 th place and a mesal. The prorran's showin!; in the last tournament in which it played was not nearly so satisfying, since at that time it lost every \&ame it fiayed.

As we all hnow by now, from last Friday's Chevron, the Computing Centre is considering the purchase of a new computer $i_{i}$ order to ease the current heavy load on the computing systeri. Several manufacturers have vic tor the contract to install the new equipment. but IBM seems to have the edge, llaving the inside track since they are the current supplier to the Computing Centre. Anotner reason that IBM appears to be uribeatavle is that the entire staff of the Cormputing centre is rumoured to have threatened to resisn if a $370 / 15 \%$ is not the new machine to be installed. If, in fact, this is the case, then we must object to this most unprofessional vehavior on the part of a Eroup of people who have a greater effect on computing at Waterloo (and as a result in Canada in general) than almost anyuody else.

We promised that this week the emphasis in this column would start to shift from Compusci to liathematics in general. Try as we may, thourh, we cannot think of anything to write about but what you see here.....

As a postlude to this ween's illmotivated lanbastiñ, thanks go out to all our correspondents, and especially to john liellor, Ian liacRae, and Russell Crook.



## across

## $1 /$ _ _ in the life

$5 /$ computer students gather here
10/ colour
14/ quickly (Fr.)
15/ Miss Dunne
16/ hindquarters
17/ Ginger Rogers' partner
19/ breakfast cereal
21/ compass point
22/ seance sound
23/ impure carbonate of lime
26/ pedal digit
29/ rob, plunder
33/ prefix meaning "many"
34/ glee
36/ layer
$37 /$ a Kenyan's neighbour
39/ iiquid measure
$41 /$ genetic blueprint
$42 /$ card game
$43 /$ brother of S.A.C.
45/ Alecksey A. Leonov made the first one (abbr)
$48 /$ Nixon or Davis (abbr)
50/ account
54/ muck
56/ cardinality symbol
58/ Hawaiian isle
59/ Trudeau's second
61/ baggage code
62/ pome
63/ cotton gin inventor
65/ Greek letter
66/ African capital
$70 /$ popular topic of conversation
$74 /$ beholds
75/ mountain range
77/ merit
78/ linear measure
79/ pursuit
80/ Soviet capital

## down

1/ Gardner
2/ prefix meaning apart
3/ Siamese coin
4/ lamb
5/ dreadful
6/ prior to
exist
8/ numero
/ trappings
10/ deodorant's target
11/ and (Latin)
12/ Hindu goddess
131 MC 3022
18/ blacken
20/ alchitran
231 $\qquad$ time
25/ according to (2 wds)
26/ stannum
27/ word of choice
28/ Greek letter
$30 /$ topmost crossbar support
31/ SNOBOL function
32/ baseball statistic
34/ frenzy
35/ originate
381 ALGOL and SPECTRE function
$40 /$ man's nickname
44/ the great god in the pit
$45 /$ McMahon's
$46 /$ appia
$47 /$ kind of light
$49 /$ employ with diligence
$50 /$ computer language
51/ survey
$52 /$ Assyrian king or Persian coin
53/ draw
55/ faith, piety
$57 /$ had (Fr.)
$60 /$ malt liquor
62/ Antiaircraft Artillery
64/ Mesopotamia
65/ at times, a traumatic experience
$66 /$ adder
67/ posture
68/ solidify
69/ man's name
$70 /$ existed
71/ Karate
72/ $\overline{10^{-7}}$ joules
73/ cell constituent
76/ French article

This week's winner is Rick Hotz. Pick up your T-shirt in the Mathsoc office, nut the price of the shirt beside your name, and cross your name off the list. This week's puzzle was constructed by Roy Gorka who also gets a T-shirt. There were 23 correct and 13 incorrect solutions submitted. Most of the mistakes were due to a lack of knowledge of forelgn languages. Cne person mentioned that ukeleles should be spelled 'ukuleles'. True, but both spellings are accentable according to the dictionary in the library. Deadline is $3: 30$ next Tuesday.
resonnse to last veok's 刀lea for morn rridinorts was terrific. Thanl: you. Those aridmords will annear in future issues.


Givell: Points $A, P, C, n$, in order, on a PFOID: Prove $A C=B D$

CrNST: Let $C$ be the noint of intersection of the pernendicular of $C D$ with the circle,
centre $A$ and radius $\sqrt{A C \cdot A B} \operatorname{so}$ that $A \Gamma^{2}=$ $A C$. $A B$.

PDCOE: Since $A C^{2}=A C$. $A R$, the line $A C$ is tancent at $r$ to circle ion.

$$
\begin{aligned}
\angle A N C & =\angle C B C \\
& =\sigma, \text { sAy }
\end{aligned}
$$

since $r=a=\pi$,

$$
\begin{aligned}
\angle C O D & =\angle C D C \\
& =\alpha, \text { say } \\
\angle \text { CAC } & =\alpha-\beta=\text { RCO } \\
& =\phi, \text { say }
\end{aligned}
$$

Irite $C A=a ; \Gamma B=b ; \wedge C=u ; \Gamma \cap=v ; C n=$ $\cdots ; \pi C=\pi D=k$.
Fron $\Delta$ gAr $\operatorname{Ban}^{2} a^{2}=1^{2}+u^{2}+2 k u \cdot \cos (c)$ Fram $\triangle$ OBR, $b^{2}=k^{2}+v^{2}+2 k v, \cos (c)$
Hence, $\left(c^{2}-k^{2}-u^{2}\right) \prime=2 k u v \cdot \cos (r)$
so that $\left(k^{2}+v^{2}\right) u-\left(1^{2}+u^{2}\right) v=b^{2} u-a^{2} v$ or $(u-v)\left(k^{2}-u v\right)=h^{2} u-a^{2} v$

Non:, $\triangle$ rac and $\triangle$ pern are similar, se that

$$
\frac{a^{2}}{D^{2}}=\frac{\Delta C A C}{\Delta!\cdot \Gamma D}=\frac{\Lambda C}{\Gamma n}=\frac{11}{v}
$$

Hence, $r^{2} 11-a^{2} v=n$
$u-v=?$ $u=v$
-- nED --



## un CLASSIFIED

(Note: mathNEWS will print your classified ads FREE OF CHARGE. Just jot them down on a silip of paper, take it to room MC 3038 and have someone there deposit it in the mathNEWS file. Ur, drop your ad in the campus mali (a free service) addressed to: mathNEWS, MC 3038 . Weekly deadiline for submissions: TUESDAYS: 4:30pm.)

FREE: Room and board in shared apartment at Weber and Glenforest in exchange for help 7:30 to 9:30 Monday to Friday on bus for crippled children. Contact Mr. Broom 884-8091

FUR SALE: Berkley-Keystone calculators, model 395. Automatic square root, 4 function memory and many other features. Comes complete with charger and case. \$116.82+ tax $=\$ 125.00$. Certified deposit of $\$ 75.00$ required. R. Beevers, Village 1, East 4-209, 884-5498. Last date for orders is February 8.
iUUTICE: There will be a car going this Sunday afternoon to the Toronto Go Club, and an organizational meeting the following Wednesday. Call 884-8249 or see F. Bernhart in MâC 5129 for information. Beginners and curious are welcome.

FUR SALE: 1965 Dodge Polara 440,318 C.I. V3, power steering, $\$ 200$ or best offer. As is, phone 334-8500.

WAITED: Editor for OPIRG newsletter. Call 885-1211, ext. 2376 or Eng 2-3321.

BLACK BUBBLE: Coffee house, Tuesdays, 3:00 p.m., Eng 4 lounge, assorted teas and coffee, pastries and homemade cookies, live entertainment, free admission. Feb. 5, Derwyn Lea and David rooke entertain.

[^0]
## matheriCS

 co-ed volleyball CRUSADERS CRUSH C'sWell, the Math C's continue to show improved strength--in numbers--if not in playing ability. There were actually eight (count lem!) of us bumping around the Seagram Gym last Monday--and two were (believe it or not!) girls.

Unfortunately, having enough girls this week was the last of our luck. We came up against strong opposition in the Crusaders, and like true competitors, we faltered under pressure.

As with last week, we got off to a slow start, and the first game was almost lost before we knew it. But with skillful play (and a lot of iuck) we battled to a 9-15 loss.

We were on the upswing, and it looked like we would take the second game. It seems, however, that fate had other plans. We stalled at 10 points and just couldn't recover. Final score 10-15. The third (and thankfully last) game doesn't even deserve mention. That we actually got 7 points is due, in no small part, to the ineptitude of our opposition.

Seriously, though, the whole team played quite well, but we just couldn't get it together. Part of the problem is that we must have two girls playing at all times. And since we only had two girls out, they had to play all three games (which gets tiring!). So come on girls, give Susan and Janice a hand. The next game is Monday. February 4 at $9: 30 \mathrm{p} . \mathrm{m}$. in the Seagram Gym. Everyone is welcome!

Phil Lanouette

## bowling <br> MIXED TOURNEY

The second annual Intramural Mixed Bowling Tournament is to be held next Saturday, February 9 at Waterloo Bowling Lanes (14 Princess St. W.. Waterloo). Last year's winners were from Co-op Residence and no doubt they will be defending their championship.

Teams must consist of 4 bowlers (2 male, 2 female) and preference will be given to teams consisting of members of the same faculty or residence. This must be done as there is only room for 24 teams. Team lists should be given to the secretary in the intramural office anytime next week. The tournament will be run in two sets (one at 12:30 and the other at 3:00) so teams are also asked to state preferred time.

Each bowler will bowl 3 games and there is no charge at all to the bowlers. Bowling shoes will be provided and must be worn by bowlers. The tournament is nonhandicap.

This tournament is being run for you so come out and enjoy yourself.

## basketball

## ST.J's BITE BAG

St. Jerome's had to bite the bag on Monday night as the Co-op team blew them out of the gym, 53-25. A solld all round effort produced the victory. All that Coach Kemp could say was "!".


Things were malnly mundane this week. We got a minute munition of messages, mostiy merely mentioning many of the myriad methods of manifolding the miraculous effect of "riathidEWS/yafi"...

Une jocular jester jeered:
"Rene Vescartes
made some charts
and in so dolng
did my undoing ${ }^{\text {i }}$
To whoever was wondering how mathiflls/vafi worked, it worked quite well. For APL freaks, honeyapple has ibeams. Try this: SYSTEM ?wCwince/apl honeyapple

## 818

( $N$ backspace B18)
to rfallen: lould you repeat that (so we can understand it) ??? to pfriouland: All it took was a few "deralls"...
to Imacrae: Ho Thanks!
to artemplton: French rhymes are not appreciated.

This week's "Try This":
SYSTEM? qed
ט.a
b.js/\&//bu
'f'b.

Th- Th- Th- Til- That's all, folks...

# grad party planned MATHSOC MEETS 

Following the strains of Happy Birthday for vice president Andy Haycock, complete with cake and candles. Tuesday's mathsoc meeting rolled on.

Tentative plans have been made for a math grad party scheduled for the Waterloo Motor Inn on Saturday, March 16 . Member John Dark requested that math society put forth $\$ 250$ from its social budget for the event with an additional $\$ 250$ to come from math dean W.F. Forbes. This sum was granted by council. The intent is to charge $\$ 4$ per person with ticket sales expected to be between 250 and 300 . Dark noted that the event will be open to the 500 students expected to graduate this year from math. Faculty members will also be invited. Plans call for the "party" to feature a bar open at around 6:00 pm, a buffet at 7:00 followed by dancing.

Mathsoc social director David McMaster, on behalf of the Federation's Board of Entertainment, requested that mathsoc put full support behind the Federation of Students in its bid to gain total control of a permanent student-run pub on campus. To this end council voted to support the Federation. Apparently the fear among students is that the university administration is seeking control of such a pub which would give the administration full control over prices. The Board of Entertainment envisions an addition to the Campus Centre pub at a cost of one-quarter million dollars that would serve as a permanent pub. The plan is to have students pay for such a venture through increased Federation fees. A referendum to gather student opinion on this is planned.

Terry Triskle of the Creative Arts Board approached council for funds for a special orchestra concert that his board wants to sponsor. Council granted $\$ 50$.

In other business, a motion was approved to hold mathsoc elections on March 13 and 14. Footnotes:
-anyone wishing to make use of the Amateur Radio Club's equipment can do so by filling in an information sheet available at mathsoc.
-thus far tickets have been sold to 54 couples to mathsoc's semi-formal "Pink Ambrosia" scheduled for this Saturday evening

## TEACH

Are you interested in teaching Cacondary school mathematics? If so, the Career Planning and Placement Centre is sponsoring such a career information ta,k for हraduating students in the faculty of Mathematics. A.W. liarris of Althouse College of Education will be speaking on Thurscay, February 7, at 3:30 p.m. in H\&C 1050. Further information can be had by calling ext. 3675.

## JJL's CCB REPORT

At last Wednesday's CCB meeting a motion was passed authorizing the spending of no more than $\$ 200$ for plants in the Great liall. Concern was expressed about the survival of the plants and the Board is looking for a viable plant.

Also this week Fred Bunting accepted his nomination as Chairperson.

Hiring procedures were discussed. I supported a motion to set up a subcommittee to investigate turnkey hiring procedures. This motion passed 3-2.

I instituted a motion of minimum office hours for the coordinator, however lack of support forced me to withdraw it. However, I expect this issue will come up again and perhaps the office will be voluntarily established.

Ex-turnkey Jane Harding told the Board about a conflict between Susan Phillips and the turnkeys. Changes were recommended to make the log book more accurate. Complaints were heard about the coordinator not being around at the expected times. A turnkey meeting was held last Friday where they tried to find solutions to the problems.

In other business the pinball situation was discussed with no solution. Also the pool table may be moved into the now non-operative games room in the future.

Art Ram approached the board inviting us to see Jeff Beckner's designs for the walls in the Pub. I liked the designs myself. However, no money has been allocated for the mounting of the designs and they have not been approved by the Works of Art Committee. Art said the Federation would pay the tab for the designs.
idext week as my last article I intend to write a history of my four month term on the Campus Centre Board. I hope you will find it interesting reading.

## PERLY

On Tuesday, February fifth, the Math Society and the Canadian Liberation Movement will present a talk by Gary Perly. Formerly a systems engineer for I.B.M., Mr. Perly is now the iNational Chairman for the Movement. He will speak on "The Computer Industry and Canadian Independence.

The talk will discuss the effects of U.S. control over the computer industry in Canada and Why and How this control must be eliminated. The meeting will be held in Campus Centre Room 135 at 3 p.m. Coffee and donuts will be served. For additional information write to "CLM, Box 784 , Waterloo" or phone 884-2679 and ask for "Dorothy".


Right from the frog's mouth, the csc entry in the Mathsoc chess tournament, RIBBIT, got tenth place, and a medal!! If we hadn't had a minor flaw in the endgame playing, we might (would?) have gotten 3 points instead of 2 . As is, we are very proud. $99.9 \%$ of the credit, however, must go to Ron Hansen, who wrote the program. In other news, the film meetings last week were not too exciting.

Be sure not to miss this thursday's (that's the 31st) meeting at 7:30 pm in MC 5158. Dr. D. Tsichritzis, associate professor of computer science at the University of Toronto, will be here to talk about "Software reliability in operating systems". Of course, the CSC's famed coffee a donuts will be out en force too. SYSTEM?burp


The Math Soc's chess tournament was concluded on Tuesday night. There were thirty-four entrants signed up, twenty-six of whon played in the first round. As a result of gradual elimination sixteen players were all that remained in the fifth and final round. The first place winner recieved a set of beer steins and a truphy, the next nine persons( or thing as in the case of the CSC's program. Ribuit ) received trophies. All prizes and trophies were presented by Paul Dwyer of Formosa Springs.

Following is a list of winners and their point total:
A. Cheron
R. Crook
R. Martin
K. Ogilvie
B. Comeau
R. Bajramovic
T. Raidy
G. Smith
J. Freer

Ribuit (CSC)


APL \& EISPACK
The following Computing Centre nonfee, non-credit courses will begin next week. To register, please contact Ms. Andrea Dietrich, the User Services Secretary, in M\& C 2008, ext. 3271.
IITRODUCTIOi TO APL ( 4 hours)
APL is a conversational programming language that is particularly suited to mathematical, statistical and scientific problems.

Emphasis will be on APL operators and the handling of vectors and matrices with a view to solving problems in the above areas.

EISPACK (1 hour)
EISPACK is an Eigensystem Subroutine Package designed to simplify the solution of the standard matrix eigenproblem. It may be used to compute some or all of the eigenvalues, with or without eigenvectors, of complex general, complex hermitian, real general, real symmetric, real symmetric tridiagonal, and certain real non-symmetric tridiagonal matrices.

The seminar will show how to use EISPACK through sample programmes. Since EISPACK consists of FORTRAN routines, a working knowledge of the FORTRAN IV language is required.

FOUND: Steve Astrop, I have your 240A notes. Contact me through H6050 Mail system...SYSTEM? MAIL MSHIELDS

IHE RIBBIT HOPS HIGH(ER)


The (in)famous chess program of this fair university has scored what can be termed as a major upset to the chess players of Uniwat. It has actually placed in a tour ament. Admittedly the tournament had no official recognition. The Ribbit, through pure luck??, scored two points out of a possible five, one point resulted from a furfeit and the other point came from two draws. These two draws exposed a bug in the program, the program does not recognize a potential draw situation resulting from the three move repetition rule. In both cases the human opponent forced a draw.

Let us hope that Ribbit will soon swallow these bugs, either that or croak.
FREE

NOTICE: A free T-shirt will be awarded to the person submitting an original gridword which mathNEWS uses for publication. To submit your gridword, drop it in the mathiNEWS file in MC3038 or use the campus mali (a free service) and mall it to mathNEWS, MC3038.

## the phantom reports

Even as these words are being written. there is in progress, the chess match of the century (would you believe the week..... well today, anyway). The honeybun's chess playing catastrophe has been taking on all comers, or at least as many as are willing to sit through it's two minute response time.... Apparently it almost beat one fellow, then got into a loop and moved one piece back and forth 'til a draw could be called.

If anyone wondered why last week's column was all in UPPER CASE, it's because someone put an "option upper" on it without warning me....

It is to be noted that FUNiNYAPPLE has now got "I-beams"s, too bad the terminals don't have right and left tacks, you could overstrike tinem and get the much more suitable "H-bean"....

At any rate... they would probably have a much easier time converting \#ABC into APL... it certainly isn't much further from the real thing.....

And speaking of the real thing (or a REASUIABLE facsimile thereof): As anyone with the intestinal fortitude to show up over the weekends will remember, the I. $P$. Sharp (Dull?) update was definitely running... definitely witnout "3 AFD".... to make matters worse, there is also a bug which likes to generate errors on file-function calls inside locked functions.... What this means to you is that a function may work perfectly under the update when you write it, but just try and lock it, and watch the errors go flying by.... The one ray of sunlignt seens to be that you can at times generate a recursive SYSTEl. ERROR (that's sunlight?). It is lots of fun, but after 5 or 6 pages of dump it does get a little tedious.... (oh well, we're desperate)....

TO HUNEYAPPLE: ridiculous sys format
TU THE UPDATE: IVMスE (R)U?

$$
E 22
$$

TO JIIS: Anytime you think of a reply.....
TJ THE GHUSTURITER: $\rightarrow 0$


## HEARING TEST :ọ̈:

Jue to the fantastic reception to the Eye Test in last week's issue, we consulted our Medical Advisor who came up with this hearing test. As we are under budget this term, we have implanted in the circle accompanying this article, a miniaturized transceiver which for the period of one week from issue will be activated to a frequency of 7 hz . If you cannot hear a sound from the paper when placed 14 inches from either ear, you definitely have poor audio response to low level frequencies. Perhaps a hearing aid might help.
(Ouestionalre-cont'd from nape 1)
proposal was taken to Senate where the motion was defeated, complete with some heated opposition. Apparently, the defeat was due primarily to possible confusions arising from the use of the word "science". In fact, the Faculty of Science was instrumental in bringing about the rejection of the motion.

This time around, rather than risk a premature journey to the senate, Faculty Council is conducting a campaign of discussions with other faculties, hoping to win support for the move. When, then, will senate approval be sought? Professors HoGee and Ponzo express doubt that any action will be taken this term. However, Dr. Staal remains more optimistic suggesting that an appearance before the senate may indeedbe made this term.

What do students think of the proposed changes? Although there seems to be no noticeable opposition to the proposals from faculty members, such is not the case among the student body. In fact, there is an appreciable negative attitude on the part of students.

Clearly tnere has been no attempt to obtain student views on the matter. What do students think of the proposed changes? In an attempt to answer this question mathisews would like your help in conducting a student poll. Please take a few seconds to fill in the following brief questionnaire. Results will be published next week.

Faculty Council has approved the proposed changes in the name of our Faculty and our degrees to:

Faculty of Mathematical Sciences
Bachelor of Mathematical sciences
:haster of Mathematical Sciences

1. What do you think of these proposed changes? (circle one)
i. opposed ii. don't care iii. in favour
2. What is your faculty?
3. What is your department?
4. What year are you in?
5. Are you co-op or regular?

Please deposit this questionnaire in one of the boxes provided on the second floor (outside iẤC 2065 and 2066), on the third floor (outside the lounge), in the mathisews file in i1\&C 3038, or drop it in the campus mail addressed: mathiNEHS, lis C 3038 .

The results will appear in next week's mathivelis.

## FEEDBACK

(Note: Letters appearing in this column represent the opinions of our readers. mathNENS welcomes your criticisms, comments, suggestions, etc. All letters should be signed, but, if requested, a pen name will be used. Submit your feedback to IIC 3038 and have someone there deposit it in the mathNEWS file. Or, drop your letters in the campus mail (a free service) addressed to: mathNEWS, MC 3038 . Weekly deadifne for submissions: TUESDAY 4:30pm.l
masmens: legal aid
In response to your note of our existence, we are trying to counter our obscurity by expanding. As we are now only open on Monday and Thursday, we need new volunteers to meet the obvious need for our organization, as indicated by the response thus far. Therefore we are having a meeting for new volunteers on Sunday, February 10, at 8:00 pm, CC 135. No legal background is needed so please attend.

## zopfault faulted

mathNEWS: Thought I'd drop yed a line and so
alm my rebirth as an enlightened proclalm my rebirth as an convert a few others too, particularly "L. van Zopfault". I would like those of you smoking to kindly put your smokes out and fasten your seatbelts, as ling thake the depths of the aforementioned "author"'s article.

Excusably so, many of you out there in one way or another:

He:"What are vou dolng tonight?" debur
She:"तh, I've got to
program. I'm kind of lucky it's a short one, should only take me four or five hours..."

Some people have even bepun to wonder if the error-finding trip is such a good thing. Shame on you disbellevers! Surely some of this has come to some good... now you know why the phrase: "Do not bend, fold, snindle, or mutilatell exists... and it really keeps neople out of nubs... and in DEBUG. Smarten up out there! Before we send a renalrman to check you out!

Now that we've established why the error-finding trip is so fun, let's bepin ours in earnest: first step back and look
at the article. Title: "Fullduplex, by ludwig van Zopfault". When in Fullduplex mode (on a cathode ray terminal) anything seen this concept of secretiveness before? What does most of the article deal with? Does the ending of the article look like anything you've seen before? Here then, is the key for our first act of maliciousness: don't knock the Phantom, man! You may not see it but the only difference between you both is that your column is more detalled... and, of course, the fact that his/theirs. was first to appear in mathNEWS..iby about a year. quality in a coar from now as today? Will your column even exist then? liaybe you should change your colum's name to "Page mode Phantom"...

As for comnuter-science-oriented articles, people in glass houses... What you in effect do in your article is say that a change in "the preponderance of Computer Science articles in mathNEWS" will take place due to your column "trying to provide a more global outlook'. Yeah. in Computer Sclence, no less. And what about this hope for "greater participation ... on the part of students in other departments."? You mean newswise?
"Well, this week in stats, a julcy regression analysis made appearence...it to me apaln... slowly. Why don't you try to report on the politics of thls place, esp. in the Math faculty? Seems to me a fairly decent article was published in the Chevron last week by R.P. Gurd.

And while we're critisizing thlngs, let's talk about your mentioning of YAFI. Now, did you ever read Henry Iv (Part 1)? Do you know who Hotspur was? "Wait a minute", you say, "precisely of what interest is this to me?"... you took the words right out of my mouth... but walt, there's another one still coming: GOSSIP! dooops, sorry, it just slipped out.

Indeed, it may well be that your choice of first sentence (last week's mathNEWS as the foundation for your article was the best there was. And by the way, E-day has come and gone; it's kind of late to try and arouse interest in it again. Kind of hard, too. Well, hope you enjoyed it. Might write again.

Stewart Dent
mathidews - a news weekly published at the university of waterloo, is financed through mathematics society fees and is available free of charge to math undergrads. The views and opinions expressed herein are those of the mathNEWS staff and are made independently of both the university administration and the math society. mathiNEWS welcomes your contributions, suggestions, criticisms, advertisements (published free of charge), feedback, etc. Contact us via room 303s. We put the whole thing together on Tuesday nights in MC 3011 ; feel free to drop in. Weekly deadiline for submissions: TUESDAYS 4:30pm.) Circulation this issue: 1200.
llaving been booted yet one room further down the hall this week (next week the wasnroom?), at $b$ an we see thet our ranks have greatly depleted. Thanks tals week to: Jim Parry, J. J. Long, bruce ilckay. dt one tine or another, tonignt we were: Pete Raynnam, Susan berg, Pat McGratn, a snarly phantom (who toys witn his pizza the way ne toys witn computers), dou Winite, llark Saaltink, Ludwig, llark Snields, Randall idevougall, Ton Uuff, Pnil Lanouette, Elger Fropwith, Nurm llacdonald, baru llaine, vave wewell and John Peedles.
Hext mathillus night: Tues. Feí. 5,7 pri, A 3 ull (or there avouts).


[^0]:    HAPPY BIRTHDAY: to Gale and Marilyn from Barb, Liz, and Elger Fropivith.

