NEWS

Calendar

Please give notification of upcoming events to Jeff. These can include lectures, seminars, committee meetings, receptions, and so on.

1991

Sep	12–15	UVM Bicentennial Celebration
Sep	14	EM Open House 1:00–3:00 Votey
Sep	14	UVM State Fair 11–5 Chittenden-Buckham Green
Sep	15	Harvest Picnic 2–5 PM Fleming Museum Tent
Sep	17	Open Forum on the Undergraduate Program, 10:50 Conference Room
Sep	17	Graph Theory Seminar 3:10 Conference Room
Sep	18	ABET Rehearsal 2–5 PM Votey
Sep	19	Faculty/Staff/Student Cookout, 3–6 PM Kalkin Green
Sep	21	Mt. Hunger hike (see page 4)
Sep	24	EM Faculty Meeting 10:50 254 Votey
Sep	24	EM Reception for new faculty and staff 4:30–7 PM Fleming Museum
Sep	24	Graph Theory Seminar
Sep	26	Graph Theory Seminar
Oct	4	Math Colloquium 4:10 002 Kalkin
Oct	14-15	ABET Site visit
Oct	17	A&S Faculty Meeting Memorial Lounge
Oct	22	EM Faculty Meeting 10:50 254 Votey

Message from the Chief

On the special occasion of a "first issue," I want to thank the editors, Dan Zwick and Jeff Dinitz, for such an attractive and informational newsletter. However, were I to have titled this column, I would have written "Message from an Admirer." Indeed, what attracted me to UVM in the first place were the great people in this department. Only rarely do I think of myself as a "chief," but often I try to be an advocate and "cheerleader" for a talented and dedicated faculty, staff, and student body whom I hold in high regard. The array of activities and the spirit of collegiality evident in this newsletter reflect the vitality, vision, energy, and strength of a department of which UVM can be justifiably proud.

Later issues will provide ample opportunities to address substantive issues. For now, I simply want to thank you for your contributions and accomplishments, and wish each of you a year of personal satisfaction as we move the department from success to success. — Ken Gross

General Delivery

This section is for general department news. This first issue is just to introduce you to the idea of a department newsletter, and to encourage you to submit items to either Dan Zwick or Jeff Dinitz. The following section titles should give you an idea of what sorts of things will go into the newsletter. The department newsletter will appear about once every three weeks. Please submit any lengthy material either by email or on a floppy disk. In general, email files are greatly appreciated, and if they happen to be in TEX or $\mathcal{A}\mathcal{M}\mathcal{S}$-TEX, so much the better.

Incidentally, we will change the slogan "we're not nerds. really" each issue, to one of your choosing. Use your imagination and submit a candidate to Jeff or Dan.

This week we have one item of GD news, submitted by Jonathan Sands.

What I did during my Summer vacation
by Jonathan Sands

The *Mathematisches Forschungsinstitut* in Oberwolfach offers mathematicians simple lodging, family style meals, excellent facilities, and opportunities to explore the vast network of beautiful walking trails extending throughout the Black Forest of Germany. During the week in early July devoted to Computational Number Theory, I had a chance to hear some of the experts and present some of my recent research. Atkin said the most memorable words of the conference when he defined a conjecture to be something which is true but not proved, and a result to be something which is proved but not true. A useful bit of information I picked up is that Maple is becoming the preferred computer algebra package among computational number theorists, and C++ is becoming the preferred computer language. I also had a chance to discuss the possibility of taking a sabbatical in 1992–93 in Saarbrücken, Germany, where I would be able to continue collaborating with Johannes Buchmann.

After the conference, I traveled with Lloyd Simons (of St. Michael's Math Dept.) and his wife Martina Lemm to the Swiss Alps and northern Italy. I wish I could have brought home some of the gelato (Italian ice cream) to all of my colleagues.

In August, I attended the Short Course on the unreasonable effectiveness of number theory (along with D. Dummit) and Mathfest at the University of Maine. Having taught there for 3 years just after finishing graduate school, I saw many old friends. Besides attending the number theory sessions and the featured lectures, I also tried to prepare for my role as Czar of the undergraduate program by going to presentations by undergraduates, a session on Women in Mathematics, and the report of the Committee on the Undergraduate Program in Mathematics. One evening I even watched some very entertaining skits representing some of the attitudes encountered by women in mathematics. I mention all of these activities so that anyone who is interested in hearing more about them or getting some references can talk to me.

Computer Stuff

In this section we plan to report on computer news and items of general interest about PC's, software, the EMBA Computer Facility, and so on. If you have some information you would like to share or if you have computer questions you would like to have answered, this is the place for it.

Some items of interest regarding the computing scene in the Department:

The Department now has 6 additional IBM 386 computers (the same as the EMBA student machines) – these have been allocated as follows:

1. 3 are "Department" machines: 2 for the offices and 1 in the Chairman's office
2. 1 has been placed downstairs in 16 Colchester for the use of the graduate students
3. Jonathan Sands has the remaining machine.

There is an associated "trickle down" of machines, including the reallocation of 3 ATT 6300 machines with hard disks. One of the VT100 terminals used by the Statistics graduate students in Mansfield has been replaced with a 6300, and the remaining VT100 terminal in Mansfield (recently replaced with a working monitor) is scheduled for retirement as soon as an additional 6300 becomes available.

The common area on the first floor of Mansfield is to be secured and the Mansfield XTerminal, printer, and probably one 6300 PC will be available in this area. This should give Mansfield parity with 16 Colchester in terms of common available machines (the analogous area in 16 Colchester is the mailroom, where one XTerminal and one ATT 386/387 machine are available for general use).

It should now be possible to produce hard copies of Mathematica graphics on the Department laser printers using the mailroom 386/387 machine. Similarly, it should be possible to produce output from WordPerfect, MSDOS-Works, PCWrite (etc.) on the laser printers by sending files across the network. Anyone interested should contact a member of the computer committee.

The Department now has a specific policy regarding the provision of equipment:

1. The Department will not provide more than one machine for any individual (additional equipment must be obtained from external grants or by individual purchase).
2. Individuals who take their Department-provided equipment home for their work do so at their own risk (and are strongly encouraged to contact their insurance carrier regarding liability). Any other use of Department equipment is inappropriate and unauthorized.

Due to low turnout, further tutorials on the use of EPIC and Mathematica have been cancelled. There may be additional sessions scheduled introducing TeX and perhaps the UNIX operating system if sufficient interest is expressed to a member of the computing committee.

Finally, for those with Internet experience: the telnet command

telnet 141.212.196.79 3000

provides access to a weather reporting service for pretty much anywhere you'd care to know about, and includes ski reports (during the season), etc.. The city code for Burlington is btv.

— The Computer Committee Desk

For $\mathcal{AMS}$-TeX users: The new version of $\mathcal{AMS}$-TeX has no \nologo macro. This is because the licensing agreement stipulates that you must "acknowledge each use upon publication." However, the following sequence of macros will get rid of the "Typeset by $\mathcal{AMS}$-TeX" logo at the bottom of the first page.

`\catcode'\@=11 \def\logo@{} \catcode'\@=12`

Colloquium

Information about upcoming Colloquium talks will be presented here. There are already a number of interesting talks planned, including a joint Colloquium with Delaware State University. Watch this space for further information.

The next Colloquium lecture, entitled *Invariant Theory and Duality in Group Representations*, will

be held October 4. The speaker is Professor Tuong ton-That of the University of Iowa.

ABSTRACT: *The Schur-Weyl duality theorem motivates a general definition of dual group representations. This structure encompasses a very large class of representations of groups, which includes all compact groups, all semi-direct products, the complementary pairs of groups that appear in the physics literature, and the reductive dual pairs of groups in mathematics. Several applications of this notion of duality to new polynomial invariants and operator invariants will be given.*

As usual there will be refreshments in the Conference Room after the talk.

Announcements

This section is devoted to announcements of interest to members of the Math/Stats Department; for example, that class assignment request forms are due on a particular date, or that academic calendars are available from Janet, etc. The kinds of things that often get posted on the door to the mail room.

THE COMMITTEE ON THE UNDERGRAD-UATE PROGRAM WILL BE MEETING MOST TUESDAYS AT 10:50 IN THE CONFERENCE ROOM. THESE MEETINGS ARE OPEN TO ALL. WE NEED YOUR INVOLVEMENT AND IDEAS TO HELP DEVELOP A PROGRAM OF WHICH WE CAN ALL BE PROUD. GIVE ME YOUR COMMENTS (PREFERABLY IN WRITING) ANY TIME AND BE PREPARED TO MAKE THIS TRULY A DEPARTMENTAL EFFORT. — Jonathan Sands

New faculty (including longterm visitors) and graduate students: See Mun Son about having your department picture taken for the "rogues' gallery."

Picnic photos will be ready soon—Mun is making extra copies that will be distributed to individuals.

HIT THE SLOPES WITH MATH
FIRST ANNUAL MATH/STATS DEPT. HIKE

Due to the incredible hiking prowess of our department, and our need for more reasons to socialize and eat voraciously, Dan Jones and Jonathan Sands have planned the mathematical conquest of Mt. Hunger on Saturday, 21 Sept. This unique event will see mathematicians approaching a limit (the summit) from two different directions. Our success in arriving at the same point (thus verifying the continuity of the earth's surface in this neighborhood) will be celebrated with lunch.

After a ceremonial exchange of car keys, we will each continue down the other side of the mountain where we will find other people's cars and drive them to the Ben & Jerry's factory in Waterbury for another reunion. There, tour leaders will accept effusive praise and entertain suggestions to venture into the Great Indoors and investigate (and ingestigate) its merits.

Please Remember:

> Sign up on the mailroom door.
> Wear your "Hit the slopes with math" T-shirt.
> Bring warm clothes (hat, windbreaker, sunscreen, ...).
> Bring a lunch and plenty of water to drink.

We will converge at 16 Colchester at 8:30 AM on Saturday morning.

If you need more information (like if you want to meet us at the trail head, or want more specifics as to terrain, clothes, ...) please contact either Dan or Jonathan. A hikers guide is "on reserve" in Dan's mailbox.

See you Saturday.

The next issue will be October 4. Keep this in mind when submitting news items for the next issue.

Visitors and New Faculty

Professor Charles Little is visiting our department this fall semester. He is on sabbatical leave from Massey University in New Zealand. His research interests range over a broad part of combinatorics, including Topological Graph Theory and Hadamard Matrices. His wife Barbara, son David (13) and daughter Heather (11) are also visiting Vermont.

Professor Nora Hartsfield is also spending her sabbatical leave here at UVM. She is an Associate Professor at Western Washington University in Bellingham. She studies Topological Graph Theory, utilizing an interesting blend of topological and algebraic techniques. She's joined in Vermont by her fiancé Mark, who is taking a leave from his studies in Computer Science.

A visitor from Yugoslavia, Professor Mara Alagić, is currently Assistant Professor at the PMF-Faculty of Sciences in Sarajevo. Her mathematical specialty is category theory applied to relations and topology. She has a husband (visiting the UVM Computer Science department), a 16 year old daughter and a 12 year old son. Her office is room 201 in 2 Colchester Ave.

There is also a Visiting Associate Professor in Statistics: Dr. Phil-jun Song, from Taegu University in Korea, whose area of study is operations research.

Please take the time to say hello to each of our visitors and welcome them to the Department.

We are pleased to welcome Dr. Jun Yu as our newest tenure-track faculty member. Jun Yu was a visitor last year, coming from the University of Washington in Seattle. He is currently collaborating with Bill Lakin on a research project.

Seminars

With the help of Visiting Professors Charles Little and Nora Hartsfield we have organized a Graph Theory Seminar for the Fall Semester. This Seminar will run every Tuesday and Thursday at 3:10 in the Conference Room. We plan to present a variety of results focusing on recent research. Every week or so we will be switching topics, so keep your eyes open for announcements. We will also have lectures from a variety of (short-term) visitors.

Be there or be indiscrete! — Dan Archdeacon

The Analysis Seminar will meet this semester at 2:10 on Thursdays in the conference room. Currently, Mike Wilson is lecturing on the *Logarithmic Integral*. Later in the semester, Ken Gross will lecture on some of his joint work with Hongming Ding.

News from the Dungeon

Items of interest from our graduate students. Please contact Dave Hochheiser.

Chronicles

This will be similar to the Chronicles column in the UVM Record—descriptions of your professional activities; conferences attended, awards received, etc.

Dan Zwick organized a workshop on *Potential Theory and Constructive Approximation* that was held in Stowe, July 25–28, 1991. This workshop, which was attended by seventeen mathematicians from the U.S., Canada, Germany, and Israel, was supported by a grant from the National Science Foundation to VT-EPSCoR (Experimental Program to Stimulate Competitive Research), and by the Department of Mathematics and Statistics at UVM. In early July he attended a NATO Research Workshop in Hanstholm, Denmark, and gave a lecture entitled "Uniform Approximation by Solutions and Supersolutions of Elliptic Differential Equations." Afterwords, he visited Sweden, including such illustrious places as Stockholm, Uppsala, and Pukeberg.

In June Jeff Dinitz and Dan Archdeacon ran a conference in Stowe. This conference, the *5th Vermont Summer Workshop on Combinatorics and Graph Theory*, was attended by 25 researchers from across the U.S. and Canada. In July, Jeff attended the *British Combinatorial Conference* in Guildford, England, and presented a paper called "A few more Room frames." Jeff and Dan have recently had a joint paper, entitled "Indecomposable triple systems exist for all λ," accepted for publication in the journal *Discrete Math*.

Gossip

Tell Jeff or Dan any juicy tidbits you might have heard. They like that sort of thing.

Lost & Found

Lost: One banner with the inscription *Explore Mathematics*. If found, notify Janet. Also, the whereabouts of two PC's, formerly in Votey classrooms, are still unknown.

Advertisements

Do you have something to sell or give away? Are you looking for a particular item? Advertise it here.

Rumor has it, Katrina Rowe makes pretty good cakes. Maybe she will submit an ad to this column.