

NEWS FROM THE CHAIR

December is an excellent vantage point from which to look back at where the Department has been, see where we are now, and to look forward to where we hope to go. There is a perception in many portions of the University that Mathematics and Statistics is a department with excellent teachers which offers large numbers of service courses for a multitude of other disciplines. The facts on which this perception is based are accurate, but tell only part of the current story. As a Department, we do, indeed, prize effective teaching, and we apply the highest standards to its assessment. We also teach a staggering number of service courses, and our interest in curriculum development keeps these courses fresh and at the cutting edge of technology. In terms of enrollments, we generate the largest number of student credit hours of any department in the University. But, as a description of Mathematics and Statistics at UVM, this picture, by itself, is an image from the past. Our commitment to undergraduate education is now complemented by thriving graduate programs at both the Masters and Ph.D. levels. We have developed powerful research groups which have achieved national and international recognition in the areas of mathematical analysis, combinatorics, algebra and number theory, and applied mathematics. The research efforts of our faculty have attracted significant and growing amounts of external funding for research. Department faculty also make major contributions in service to both the local and the professional communities.

Some figures recently gathered from faculty in Mathematics will help to quantify the significant advances in scholarship that have occurred as the Department has developed over the past few years. Currently, there are 15 tenure-track faculty in Mathematics, and two senior faculty in other departments hold secondary appointments in

Mathematics. Over the past two years, this group has published 43 scholarly articles in refereed journals. An additional 24 articles have been accepted for publication by refereed journals and are currently in press. These faculty have given 42 addresses on their research before professional audiences, and at least 28 of these addresses have been invited talks. Faculty have refereed 54 scholarly articles submitted to journals for possible publication. Indeed, five faculty are on the editorial boards of nine refereed national and international journals. For the two year period from January, 1993 to January, 1995, research funding from external sources totaled \$516,600. It should be noted that this figure does not include research funding for faculty which flowed through some other unit in the University, e.g. the College of Medicine, but reflects only funding on which a Mathematics faculty member was the Principal Investigator. Besides supporting faculty research programs, our external funding supported the advanced studies of eight graduate students in the Department's Masters Program in Mathematics and the Ph.D. Program in the Mathematical Sciences. Finally, I might note that a colleague with a primary or secondary appointment in Mathematics has been designated a University Scholar in each of the last three years.

The figures given above reflect where the Department is now. It is my hope, as Chairman, to continue us on course as we seek to increase our achievements in teaching, scholarship, and service in the future. The current Department of Mathematics and Statistics at UVM is multifaceted. As word of what we do spreads across the University, it should not be long before perception catches up to reality.

--William Lakin

NOBEL LAUREATE ATTENDS UVM CONFERENCE

For the first time ever the American Mathematical Society and the Mathematical Association of America, the two major professional organizations for mathematicians in America, held their joint summer meeting on the UVM campus. Several UVM faculty members conducted special sessions in their areas of research. Professors J. Michael Wilson and Roger Cooke jointly ran a special session on classical harmonic analysis, attended by 14 specialists in this area. The first speaker in the session was Herbert Hauptmann of the Buffalo Medical Center, winner of the 1985 Nobel prize in chemistry, who spoke on diffraction patterns. Among other speakers in this session were Richard Wheeden of Rutgers University, Robert Strichartz of Cornell, Stephen Krantz of Washington University, and Andrew Odlyzko of Bell Research Laboratories.

MAKING CONTACT WITH NEW STUDENTS

Another innovation at UVM this year, which it is hoped will become an annual affair, was the get-acquainted session on August 28 for new advisees, organized by Professors Kenneth Gross and Roger Cooke. The session, at which Deans Pinder and Hermance made an appearance, consisted of some remarks by Professors Gross and Cooke, brief talks by current mathematics majors specially recruited for the session, a barbecue luncheon, and games.

UVM GETS A CHAPTER OF AWM

In the spring of 1995 sophomores (now juniors) Krisan Stone and Fay Smullen wanted to write term papers on the subject of "women in mathematics" for the history of mathematics course (Mathematics 161) in the Spring of 1994. After working on the project for some time and surveying the current status of women in mathematics, they decided to attempt a more activist project and organize a chapter of the Association for Women in Mathematics at UVM. The chapter is now a going concern, with Helen Read as advisor and official recognition by the Student Association. Krisan and Fay are officers of the Mathematics Club also, and excellent role models for

this year's class of new students.

COOKE CONTRIBUTES TO THE HISTORY OF MATHEMATICS

Roger Cooke is the author of "The Mathematical Legacy of Sonya Kovalevskaya", one of several invited papers to be published in a forthcoming volume on the history of modern mathematics. The volume, which is being published by the Mathematical Association of America, is now in press and will appear in 1996. Professor Cooke is also the author of "The History of Mathematics", a textbook to be published in 1996 by PWS Kent Publishers, Boston.

-Roger Cooke

EN-GROSSED

Ken Gross was an editor of the Proceedings of a Conference in honor of the distinguished mathematical analyst Ray A. Kunze, entitled "Representation Theory and Harmonic Analysis." This volume was published by the American Mathematical Society in its journal series "Contemporary Mathematics". He is also the author of two of the papers, the first titled "Invariant Theory for Boundary Components" and the second "Total Positivity, Harmonic Analysis, and Random Walks on Weyl Chambers." The latter paper was co-authored with Donald Richards, who is Director of Statistics at the University of Virginia.

THE WRIGHT STUFF

Bob Wright continues to participate in the Maple community. His recent paper in the Journal of Numerical Algorithms contains proofs which were done with major computational assistance from Maple. In August Bob attended the CoMath '95 Conference on Maple and Theorist in Stockton, California, where he presented the paper "Using Maple to Estimate Projections in Spline Spaces". He tried a pre-release version of Maple V4 (impressive graphics and worksheet interface) as well as a pre-release version of Windows 95 (needed a little work). Bob also used Maple to construct a differential

equation model in collaboration with Dr. Lou Mulieri of the Physiology Department. That work has been submitted for publication.

IN THE WRIGHT DIRECTION

Bob Wright has taken over the duties of Director of Graduate Studies for Mathematics from Dan Archdeacon who had put in several successful years of building and organizing. Bob says Dan's thorough administration and Karla Karstens' fine work with graduate teaching supervision helped a lot with the transition. Bob says it is fun to be involved with Math's neat graduate students.

Bob Wright's office is now located at 107 Mansfield House. Bob moved during the summer from the 4th floor of 16 Colchester where he had 12 years of good neighbors and good views, but many summers of high heat. The new office was occupied by now retired Bill Chamberlain for several years, so Bob is keeping that office in the Columbia tradition.

--Bob Wright

MATHFEST

-from the September, 1995 Vermont Record

Professor Emeritus Joseph Izzo and lecturers Tony Julianelle and Holly Puterbaugh of the Mathematics and Statistics Department served on the Local Arrangements Committee, chaired by Associate Professor Jonathan Sands, for the Burlington Mathfest held at UVM on August 6-8. More than 1,000 mathematicians from across the United States attended the conference, which included the annual summer meetings of the American Mathematical Society, the Mathematical Association of America and the Association for Women in Mathematics. Professors Dan Archdeacon and Roger Cooke and Associate Professors Mike Wilson, David Dummit and Sands organized special sessions for the presentation of papers. Among those presenting papers were Archdeacon, Sands, Professor Ken Gross, lecturer Lingsueh Shu an visiting Assistant Professor Brett Tangedal, as well as David Hayes, currently a sabbatical visitor to UVM from the University of Massachusetts. Participating in panel discussions were Professor Jim Burgmeier and Rick

Cleary, a visiting Associate Professor of Statistics.

Some former members of the UVM Math/Stat department were also involved in the Mathfest. Hongming Ding, now at St. Louis University, organized a special session and gave a talk. Paul Bonnington, currently at the University of Auckland in New Zealand, spoke on joint work with Dan Archdeacon and Jozef Siran. Dorothean Chair-designate Charles Colbourn also spoke.

Other members of our department generously donated time as volunteers. Dave Morency, Jim Burgmeier, and Larry Kost staffed the book table and thereby secured a large donation of new books for the department. We all had fun claiming our favorites in the conference room after the mathfest was over. Roger Cooke, Anthony Julianelle, and Jonathan Sands volunteered to drive vans for the hiking outing on the day after the mathfest. The fact that this outing never materialized should not be taken as any reflection on their driving habits!

The number of students from our department who volunteered was most impressive. Rob Poodiack, Sara Thiery, Ashley St. Martin, Shawn Warren, Mo Shepherd, Sharon Fox, Brian Wilson, Ben Tucker, and Andrei Zherebtsov all helped out with registration.

Finally, we had unsolicited help from Mary Lou Gross. The Mathfest was a big success by all accounts.

AHOJ FROM BRATISLAVA

Ahoj means "hello" in Slovakian. It's pronounced "ahoy", like the nautical greeting. I was living and working in Bratislava for two months (almost) as part of my sabbatical. I spent a lot of time with my old UVM colleague, Jozef Siran, who sends his regards. I was slowly adjusting to life in the big city and learning how to make my way around saying mostly "Prepachte, ja nehovorim po Slovasky" ("Excuse me, I do not speak Slovakian"). The people were all friendly and helpful.

While there I was trying as much as possible to live the life of the residents. That means I was living in a typical eastern European apartment, shopping in the

local markets, riding the public transportation, preparing my own meals etc. I refused to shop at the K-mart in town. Life this way was sometimes quite inconvenient, but always quite interesting. Let me describe a typical day.

I woke up in my one room apartment on the 8th floor of a Soviet-style housing project. Out the window I could see 6 other buildings, all identical to mine. One of these dominated my view straight ahead to the east, giving me a good view of the way 56 other families live. A couple of blocks to the north I heard the trams rumbling down Ruzinovska Street, a main artery out of town. I lived near the end of the tram line, and since only 20% of the Slovaks have cars that means near the edge of the city. Beyond the main street was a chemical factory. I was told proudly that it is the oldest chemical factory in Slovakia. That was reassuring. Beyond the factory I could see the foothills of the Small Carpathian mountains if it was not too hazy. To the right I could see the smokestacks of a large oil refinery. Such pretty flames out the top at night.

Now I know why this was a workers paradise: no commutes! The industrial areas were right next to the residential areas. What kind of city planner places a 60,000-person housing (Ruzinov, where I lived) complex between a chemical plant on the north, an airport on the east, and an oil refinery on the south?

My apartment was small, but neat and blessedly clean. The main room was 12 feet by 18 feet long with the window along the short side. I had a couch which pulled out to a bed, two chairs, and a coffee table. I used the kitchen table for my notebook computer. The rest of the apartment consisted of a foyer, bath, and kitchen, together occupying another 12 by 18 feet. The kitchen had a door which went out to a small porch. I gathered my courage and stepped out on the crumbling concrete. It held my weight. I had a TV. It got 2 Slovak stations, 2 Austrian stations, and 2 Hungarian stations. Nothing in english. Believe me, "Wheel of Fortune" is a tough game in Slovakian. On the other hand, the "Addams Family" sounds pretty natural.

After breakfast I'd get dressed and go to the station to catch a tram. They came every 10 minutes so the wait was not long. Usually I stood as all the seats were taken. It was about a 20 minute ride to the

Slovak Technical University where I met with my colleagues. We worked until 1:00 or 2:00 in the afternoon. I had access to the internet at the university so I could send messages to Mara, Talis, and Nick (all three have e-mail).

In the afternoon I sometimes wandered through Stary Mesto, literally "old town". It is small, as many buildings have been torn down in the last 20 years. On a hill is the Hrad, or castle. It is about 800 years old. It's a rather squat, ugly building, but the remnants of the old town walls are picturesque. Unfortunately, 25 years ago they tore down the Jewish section of town and forced an interstate across the Danube and right between Stary Mesto and the Hrad. Big mistake!

Wherever I traveled people told me stories of what it looked like 10 years ago. The border with Austria is along the Danube, so this was the line of the iron curtain. The whole riverbank was lined with barbed wire and guards were stationed at intervals. There were promenades along the river, but they were all closed. I guess it was to keep the Austrian proletariat from fleeing to this worker's paradise. I knew what the iron curtain meant in theory, but it's still educational to see what it meant in practice.

On the way home I would stop at the local market and shop. Let me give you some idea of the prices. The exchange rate is 1 USD = 30 Slovak Crowns. Tram tickets are 7 crowns each. Jahodovy Dzem (strawberry jam) was 24 crowns for about a 12 ounce jar. Of course I got the kind marked sterilizovany, whatever that means. (Sterilized? Is the other kind unsterilized? I don't want to know.) Cheese was 16 crowns for a 5 ounce slice. The more "western" the item the higher the price, and some western goods are available. You can get Kellogg's Slovak version of Frosted Flakes (Frosties!) and Cocoa Krispies (Coco's!) at about the same price as in America.

After dinner I would practice my Slovakian. The language suffers from a severe shortage of vowels, although consonants are readily available. Consider this sentence: Strc prst skrz krk!

John Steinbeck once said "We don't take trips, trips take us." Well, this is what life was like where I've been taken. Dovidenia (good-bye)!

--Dan Archdeacon

Dan's trip was cut short due an injury he received during a basketball game. Apparently Slovakian medicine leaves a lot to be desired. Upon his arrival at the local medical facility the doctor took one look at his leg and pronounced it broken. He then gave Dan some forms to fill out and instructed him to "walk" them over to X-ray. Fortunately, the injury was a torn ligament and not a broken bone. The upside is that Dan has received many compliments on the distinguished professor appearance his cane has provided him. And with that hat, Dan sure looks like he's gone European on us.

JOHANSSON PRESENTS

In October Bert Johansson traveled to St. John's, Newfoundland where he made a couple of presentations to the Eastern Canadian Regional meeting of the National Council of Teachers of Mathematics. The "Newfies" as the Newfoundlanders call themselves, were very friendly and warm in stark contrast to the land around them. Newfoundland is definitely worth a visit, but I would make it in the summertime.

--Bert Johansson

THE "Z's" IN BUZAS

In August I spent 2 weeks in Sweden visiting Jesper, a Swedish friend I met while he was spending a year in Burlington working as an au pair. We met playing soccer. I spent one week in Helsingborg, Sweden which is Jesper's home town. We also traveled to Stockholm, Karlstad and Gothenberg and were in Gothenberg during the world track and field championships. I had a great time in Sweden, and it is worth mentioning that the beaches were beautiful.

--Jeff Buzas

Talk about a laid-back kinda guy. Jeff was so relaxed on his trip to Sweden that he fell asleep at the Paris airport and missed his plane to Copenhagen.

MATH CLUB

The Mathematics Club has had a few problems meeting this semester due to busy schedules among the four officers. The officers this year are: Ben Tucker, President; Krisan Stone, Vice-President; Faye Smullen, Secretary; and Xuan Zheng, Treasurer. However, we have plans for next

semester. Probably the thing that we are most excited about is that Brent Morris is hopefully coming to speak about the relationship between Math and magic. And he's worked for the National Security Agency. Exciting stuff!

Also we plan on attending the HRUMC (Hudson River Undergraduate Mathematics Conference) again next year. We are currently coercing some math majors to give a talk at this thing. David Morency and Ben Tucker also have a list set up through the internet with most math majors addresses on it so if you have anything that you wish to be publicized let one of us know.

--Ben Tucker

BRILL DUMPS DUCKS

-from the Burlington Free Press, 9/10/95

Steve Brill of Richmond Rescue in Richmond, Vermont released plastic ducks into the Winooski River on Saturday, September 9. No, this was not a rescue simulation. The event was created to raise money for the volunteer rescue squad's new home. A ground-breaking ceremony was held before the race.

(Was that a duck race?)

NEW KIDS ON THE BLOCK

Faculty

Daniel E. Bentil

As a biomathematician, Daniel Bentil brings to this campus expertise in the interdisciplinary area of mathematical biology.

Bentil received his doctoral degree from Oxford University in 1990 and was awarded a postdoctoral fellowship at the University of Washington in Seattle for one and a half years after which he accepted an appointment as a visiting assistant professor of applied mathematics at the University of New Hampshire for the 1992-93 academic year. He then accepted an assistant professorship position at the University of Massachusetts at Amherst for two years

and joined our department this academic year. During the period of 1983-87, he was a lecturer at the University of Science and Technology in Kumasi, Ghana, where he taught several undergraduate and graduate level applied mathematics courses. During the same period he undertook various biomathematical research activities as a visiting scientist at the International Center for Theoretical Physics in Trieste, Italy and at the Scuola Normale Superiore in Pisa, Italy.

Bentil's research interest and experience in modeling biological, biomedical and ecological problems have been varied. His last five years of research have been predominantly spent on a new and important theory for generating biological pattern and form in embryology, and how one can use it to model, for example, the diversity of fingerprint patterns associated with certain medical disorders and the mechanics of wound healing and scar formation. What is important about Bentil's projects is not so much of the mathematical details but the fact that there are relatively few models at present that could possibly guide our understanding of developmental issues in biology. For this research Bentil developed a systematic, foolproof technique for determining model parameter values, a notoriously difficult problem in the past that had defeated many major figures in pattern formation research. Other aspects of his research include modeling and control of bovine tuberculosis infection in badgers and cattle, modeling the growth and transmission of hazardous pathogens, such as *listeria monocytogenes* within the food chain, and mathematical studies on renal blood flow autoregulation.

Bentil argues that genuine mathematical biology is usually done in collaboration with experimentalists.

He has, therefore, held preliminary meeting with some researchers in the Departments of Molecular Physiology and Biophysics as well as the Department of Botany. One of his primary goals at this university is to establish an interdisciplinary mathematical biology and ecology course, the level of instruction of which may vary between mathematics and life science students. Such an interdisciplinary course, Bentil argues, will reinforce existing interdisciplinary activities on campus and inculcate some awareness of and familiarity with various mathematical techniques and methods for deciphering

biological and biomedical information, which is becoming increasingly quantitative.

David Hayes

Professor David R. Hayes of the University of Massachusetts at Amherst is spending a sabbatical year as visiting professor in the University of Vermont Department of Mathematics and Statistics. Professor Hayes, whose research specialty is number theory, is collaborating with UVM Professors Dummit and Sands as well as postdocs Tangedal and Shu on research projects related to Stark's Conjectures.

Tony Julianelle

Tony is from New Haven, Connecticut. He received his bachelors from the University of Chicago, Masters from Virginia Tech and Ph.D. from University of Massachusetts. He also spent two years in Botswana while in the Peace Corps. His dissertation was in the area of complex manifolds but is now working more in statistics and on his teaching. In his spare time, Tony enjoys hiking, climbing and skiing. In addition, Tony is treasurer of the Burlington chapter of Amnesty International.

Lingsueh Shu

Lingsueh Shu was born in Taipei Taiwan. She came to the U.S. in 1987 to pursue a Ph.D. degree in Mathematics which she received in 1992 from the Department of Mathematics at Brown University. Lin held a postdoctoral research and teaching position at the Ohio State University from 1992 to 1995. She is now a visiting faculty member at the Department of Mathematics and Statistics at UVM. During her free time, Lin enjoys doing research in Mathematics, loves music and gnomes. Her preferred winter sport is downhill skiing.

Math Graduate Students

James M. Brosseau is doing graduate work in applied mathematics...research with Jun Yu studying ice caps and sea surfaces. He plans to go to MIT for his Ph.D. with a main focus in climate modelling. Jim likes to ski, ski, ski, and tennis. Jim is engaged to be married. His fiancée's name is Nicole. She is

an accountant. Jim says, "Life is good, math is good, and I try to work towards a better good."

Sherri DiBernardo is from Bellows Falls, Vermont and went to St. Michael's College for her undergraduate career. She is working with Dr. Lakin for her GRF, and hopes to get her Master's in May 1997. Just in case that doesn't happen she is preparing for a back-up career as a trapeze artist, providing she overcomes her fear of heights. Might we suggest an alternative career in stand-up comedy?

Susan McAuliffe grew up in Bethlehem, PA. She came to UVM to do her undergraduate work in mathematics in 1986-90. She then met Sean McAuliffe and they were married in April, 1993. Between undergraduate and graduate school, Sue worked at Bombardier Capital Inc., a local finance company. Her most recent job was at BCI as a Market Research Analyst. In the Fall of 1995 Sue left her Shelburne, VT desk job (with a view of Lake Champlain) to the Champlain Islands to become a "dungeon dweller"...and says that she doesn't regret it one bit.

Sue says she loves teaching and is "psyched" to not have to don suits & heels, and spend 8 hours a day in the "stuffy business world".

Beyond grad school Sue would like to continue teaching, as she feels it is rewarding and often more like fun than work. As for her math goals, she would eventually like to become involved in a textbook publication project.

Susan's hobbies include hiking, skiing and general outdoor exploring. Susan and Sean love to take long drives on VT back roads, and have started a collection of photos of covered bridges. Seems as though Sue is already on her way to a book publication project!

Question: What was Susan McAuliffe's maiden name? **Answer** on last page.

Al Parker, a native to Taunton, Massachusetts (a half hour south of Boston), earned a B.S. in Math from Bridgewater State College in August of 1994. Since large-mouth bass fishing doesn't put food on the table, Al hopes to apply for Ph.D. candidacy next year after completing the Masters' program at UVM.

Ian Stobert is reported to have been raised by a pack of wolves in the Arctic cold of Canada. He is distinguished from the other math gurus by his tendency to say "Eh" and drink cheap Canadian "water" (see Liz West's bio below), thereby increasing the amount of "Eh's" per sentence. After months and months of planting trees, he found that he loved them so much he decided to go into the field with trees (graph theory).

--courtesy of Sherri & Liz

His Story - Ian Stobert is a spy from Canada sent down to Burlington by the Canadian Government to infiltrate Ben and Jerry's to steal recipes. He is now undercover as a graduate student at UVM where he practices a form of Buddhist Graph Theory. He aspires to become the undisputed Inter-Galactic Ping Pong Champion of the Universe. He likes it down here, eh?

Liz West, a SWF, is desperately seeking her Master's in pure mathematics. Prior to this, she cruised (she originally wrote cursed - Freudian slip, Liz?) the campuses of California. In particular she spent most of her time at the University of California in Santa Barbara. Her hobbies include algebra, playing cribbage and drinking.

We're fairly certain Liz is referring to "water" when she mentions drinking as a hobby. After all, she is a California girl and they're really into that New Age, healthy stuff.

Statistics Graduate Students

Frank Giglio is from North Brunswick, New Jersey and did his undergraduate work at Rutgers College majoring in Mathematics. He comes to UVM to get a Masters' in Statistics in order to pursue a career as an actuary. Frank hopes to work and live in New York City.

Glen McFarlane is from the BIG state of TEXAS and received his B.S. in Mathematics from the University of Houston. He is currently a first year Masters' student in Biostatistics and plans to attend medical school after he finishes the Masters' program here at UVM. His career goal is to work for either the Centers for Disease Control or the World Health Organization as an infectious disease epidemiologist.

Glen enjoys hiking, skiing, running, and tennis. He likes to travel and visit art museums. His favorite

hobby is photography, and loves logistic regression.

Farouk Abdul-Wahid and Kathleen White who live off-campus, and Renee Lavigne and Hong Qin were unavailable for bio information.

A big WELCOME to each and everyone of you!

Also, WELCOME BACK to:

Richard Foote - glad to have you back in the ol' Mathematics shoe.

Hosny Hamdy - returns to us from Kuwait.

SABBATICALS

Dan Archdeacon was in Bratislava during the Fall of 1995 exploring snarks. Unfortunately, he seems to have hit upon a few snags instead (see Ahoj from...). Dan plans to complete his sabbatical in New Zealand, during the Spring semester of '95.

Richard Foote - 95-96. But he's not giving any details just yet.

William Lakin will be visiting the Institute for Basic Research in Molise, Italy for 3 weeks during his sabbatical in the Spring of '96.

Larry Haugh is taking an academic year sabbatical at good ol' UVM. He is continuing collaborative research work with the Rehabilitation Engineering Research Center for Low Back Pain. One of these projects involves development and testing of a new short instrument for early prediction of occupational disability from low back pain injuries. Two of the Biostatistics graduate students, Mukta Tripathi and Glen McFarlane, are also working with the Center.

In addition, Larry is part of a National Science Foundation project to link 44 academic and nonacademic statisticians nationwide. He is paired with an ATT-Microelectronics Ph.D. Statistician for the purpose of mutual visits and development of an instructional case study (in experimental design for process improvement). If the various case studies developed nationally have adequate breadth and instructional value, he will help edit a book compilation on the subject.

Larry will also be developing a new Engineering Statistics course to be offered for the Civil, Mechanical, and Electrical Engineering programs as a replacement for their STAT 141 requirement.

RECENT ACQUISITIONS: BAILEY HOWE

Applications of Conic Section - video

Trigonometric Function: Solving Triangles - laser disc
Both of these are from Films for Humanities & Science Series.

Fractals an Animated Discussion - video
WH Freeman

The Beauty & the Complexity of the Fractal - video
John Hubbard

All 4 are in the Media Center, Bailey Howe Library, first floor for on site student use or faculty reserve/take out.

How to Teach Mathematics: A Personal Perspective -
Steven G. Krantz, 1993, AMS

Research Issues in Undergraduate Mathematics Learning - Kaput & Dubrinsky, editors; 1994, MAA

On Order: video - Learning about the TI-82 with
Sally Fischbeck, Math Ware

Problem Solving Strategies; Teacher's Resource Book and Answer Key, Kenneth Johnson, Key Curriculum Press, Grades 9 - College

This selection will be in the Curriculum Materials Room directly opposite the reference desk on the main floor.

About 5 years ago the Curriculum Room was in a back corner room off the third floor book stacks. Before that it was in a dingy room on the fourth floor of Waterman. Progress is slow but it is worth a visit to the Curriculum Materials Room to see what is currently available in the math section for elementary/secondary level. On a recent Saturday several teachers from the area were searching out materials.

Please send any suggestions on acquisitions, videos, or the above content areas (include actual catalogue page as it is helpful to the library) to: Karin Larson, who is a Library Committee member whose focus is on materials appropriate for Math 15 & 16, 17, 19 & 20, 21; elementary and secondary teachers.

FUN AND GAMES

5th Annual Math/Stat Hike

On October 14, the department held its annual fall hike. This year 28 people and 1 dog braved the elements to climb Mt. Hunger. Among the hikers were faculty, grad students, undergrads, family members, and friends. Half of the people (along with the dog) started up the Waterbury trail; the others started from Middlesex.

At the trailhead in Waterbury, the weather was sunny and warm. We set out at a steady pace, enjoying the company, the scenery, and what was (at first) a delightful autumn day. About half way up the mountain, though, clouds began to roll in. The temperature abruptly dropped, and soon it was raining. A few hikers--we won't name names--turned back, but the rest of us, undaunted, continued on.

After scrambling up some slightly slippery rocks at the top of the trail, we at last reached the summit. There we met the Middlesex group for lunch and enjoyed the somewhat cloud and rain obscured view. We then exchanged car keys before heading down the other trail.

At the top of the Middlesex trail, which is fairly steep, open ledge, many of us employed the time honored, if undignified, technique of sliding down the rocks on our rear ends. Once past the ledge, our group inadvertently strayed off the trail and wound up having to backtrack a bit. Our big mistake was to follow Al Parker's dog!

It rained on and off the rest of the way down, but eventually we made it to the bottom, a bit damp, but none the worse for the wear. We drove our borrowed cars back to Waterbury, where we met up with the other group for some well earned Ben & Jerry's ice cream.

--Helen Read

Math/Stat Annual Picnic

The Mathematics and Statistics annual picnic was held at the Maple Street Park in Essex Junction on Saturday, September 10, 1995.

The event was well attended by faculty, staff and their families. It was our opportunity to welcome new members to the department such as Daniel Bentil, and grad students and to get reacquainted with some good friends like Dr. Moser (former Chair and faculty member) and his wife Betty, also Heath Riggs (retired professor) and his spouse Harriet as well. Dean Pinder also joined the group.

Entertainment included volleyball, softball, and just plain horsing around.

Everyone contributed generously to the fare of chicken, hot dogs, hamburgers, salads, desserts, munchies, drinks and appetites.

Pictures of the event can be viewed on the bulletin board across the hall from the Conference Room at 16 Colchester Avenue.

Ping Pong Tournament

The action was fast and furious in this Falls' (1995) Dungeon Pong Tournament. Well, at least it was furious. Maybe it wasn't even furious, but there was plenty of action. This rendition of the tournament featured ping pong professionals from various backgrounds. We had international players, people from Taunton and all sorts of TV characters. There were mathematicians, statisticians, undergrads and even a work-study person. Talk about diversity.

When the smoke had cleared the results were the same; Comboman (Jeff Dinitz) and Lightning Boy (Brad Mongeon) once again set themselves apart from the other nineteen contenders. The champion has not yet been determined, but Comboman is determined to regain the title he lost in 5 games last year to Lightning Boy.

NOTE: The Dungeon Pong Tournament Committee is looking for a 1st year grad student to run the show next semester. Til then, Good Math & Good Pong.

--Tim Singleton

MATH/STAT ANNUAL HOLIDAY PARTY

It is time to start planning for our end of year holiday party. The party is scheduled for the last reading day which is Wednesday, December 13th. Please make note of the "colorful" invitation (courtesy of Larry Kost) which is posted on the mailroom door.

Once again we are trying to plan (plot) another conversation stimulating game. As most of you remember, last year our theme was ID the baby photo. Everyone participated either by submitting their own precious pics or matching names to pictures by ballot. Even those who didn't voluntarily play got involved. (Remember the bootie prize?)

Some suggestions for this years festivities are high school or college graduation photos - we could either guess who they are or we could simply write "most likely to ..." next to them. Another suggestion was to match faculty/staff with their parents photos. Or draw a picture of what you want to be when you grow up, we could guess who's they are. However, all these themes involve photos or pictures. Does anyone else have an alternative? Suggestions would be welcome and should be submitted as soon as possible. Karen has volunteered to organize and monitor whatever game is chosen.

--Karen Wright

SPIRIT OF GIVING PROGRAM

Once again, the department is sponsoring a family for the Spirit of Giving Program. The need seems to be especially dire this season, with the lack of money for heating subsidies. This year we are sponsoring a family of four: two young boys (ages 2 months and 1 1/2 years) and their parents. Karla Karstens has the details on the individual needs of each family member. Gifts wrapped or unwrapped will be accepted through finals week. In addition, extra food will also be appreciated. Cash donations are welcome, as Karla and Janet usually get a food certificate, and may be able purchase credit towards the family's heating bill.

The department has always been more than generous and your help will be especially appreciated this year.

--Karla Karstens

Answer: Susan McAuliffe's maiden name was - Steinberger.

PERSONALS

Baby Boom in Math/Stat

Jonathan and Peggy Sands are expecting a baby in the merry month of May.

Karla and Sandy Karstens are also expecting a baby in May.

Tsana and Michael Nobles are expecting a baby, you guessed it, in May.

Janet Ferguson's daughter and daughter-in-law are expecting in January and July respectively.

Our wishes for Joanne Brown this season are for improved health and a new beginning in '96.

Our Sincerest Condolences To:

Karla Karstens for the loss of her father and to Ken Golden for the loss of his mother this year. Also, our condolences to Ken and Marylou Gross on the loss of her father.

In Memory

Dr. Peter Rodney, who was a visiting lecturer in our department for the 1993-1994 academic year, died in October of 1995 at the age of 30 while on business.

Peter's area of research was in combinatorial design theory. He received his Ph.D. degree under Eric Mendelsohn at the University of Toronto in 1993. After leaving UVM he received a permanent position at TimeStep Corporation in Ottawa where he did work on cryptography.

Peter will be fondly remembered by all those who knew him. He had a good year here and made many friends. He was the most low key person around with a great sense of humor and was a promising researcher with a bright future. Things were looking good for Peter; his job at TimeStep was a permanent position and it was the first time that he and his wife Marie both had jobs in their hometown of Ottawa. They had recently purchased a home and Peter was working hard fixing it up.

We are all extremely saddened by his untimely passing.

--Jeff Dinitz



LOOK AT THESE UNSOLVED PROBLEMS. HERE'S A NUMBER IN MORTAL COMBAT WITH ANOTHER. ONE OF THEM IS GOING TO GET SUBTRACTED, BUT WHY? HOW? WHAT WILL BE LEFT OF HIM?



