
Mathematics and Computer Science Newsletter

Spring 1999 ♦ Issue 4

Student Paper Published

Jennifer Murrah (Mathematics, '98) has had her senior seminar paper, "The Formation of the Rainbow," published in the Spring 1999 issue (volume 58, number 2, pp. 16-38) of *The Pentagon*, the official journal of the Kappa Mu Epsilon national mathematics honor society. Jennifer's paper was presented at a regional KME conference in the spring semester of 1998, where it received an award for the best undergraduate talk. Jennifer also won the "Class Act Teacher Award" from Mt. Juliet High School during her first year of teaching.

Student Presentations

Five computer science students presented papers at the Mid-Southeast ACM Conference in Gatlinburg, TN, November 12-13, 1998. Those presenting were Brad Bell, "Implementing a Computer Game using Microsoft's DirectX Application Programming Interface"; Jonathan Brasfield, "Modem Bonding: Is the Union Worth it?"; Michael Adams, "Palm Pros and Doctors: Old Problem, New Cure"; Sam Green, "Accessing X Windows Applications through the Web Browser"; and Philip Robison, "The Future of Healthcare Promotions: The Web." These papers were written as part of the senior seminar in computer science in the fall semester of 1998.

Mathematics major Jennifer Middleton presented her senior seminar paper "Mathematics in the Natural World" at the Thirty-Second Biennial Convention of Kappa Mu Epsilon in Lakeland, Florida, April 22-24, 1999. The paper was written as part of the senior seminar in mathematics in the fall semester of 1998.

All senior seminar projects were presented locally. The other two mathematics majors completing seminar projects were Amanda Davidson, "Model of the AIDS Epidemic" and Lori Davis, "How to Tune a Radio."

3rd Annual Science and Mathematics Alumni Conference

As part of the homecoming festivities, the departments in the science and mathematics areas hosted the 3rd Annual Science and Mathematics Alumni Conference on February 12, 1999. The activities started at 2 pm and concluded with an alumni dinner and awards presentation in the evening. The afternoon session consisted of eight of our alumni making fifteen-minute talks on what they had done since graduating from Union and what they were currently doing. These sessions were extremely interesting and our current students received these testimonies as highly motivational for them to continue to pursue degrees in the sciences and mathematics. The speakers were Jonathan Miller (Computer Science '96), Kimberly-Clark; Shawn Phillips (Chemistry/Physics '88), Vanderbilt University; Dr. Carol Weaver (Biology '70), Union University; Kimberly Coombs (Mathematics '95), Nichols Research; Oliver Dossman (Computer Science '94), Kirklands; Van Raley (Chemistry/Physics '84), Mobil Process Technology; Tim Britt (Mathematics '82), Jackson State Community College; and Christopher Todd (Biology '89), Envirogreen.

At the dinner, Roy R. Thompson was presented with the alumni award; his stories of Union from many decades ago were greatly enjoyed. Dr. Herbert Sierk, who served Union on the Biology faculty from 1970 to 1977, was presented with the former faculty award.

Students Participate in Programming Contest

A regional programming contest sponsored by the ACM was held at Murray State University, Murray, KY on November 7, 1998. Union sent two teams to the contest. The team of Sam Green, Michael Adams and Tim Newell placed fourth out of eleven teams. Aaron Hardee and Wes Plunk also participated; they

were the only team in the contest with just two members. This was the first time in competition for each of the five students.

Achievement Tests

Each year, the department gives awards to the students scoring the highest on the Major Field Achievement Test in mathematics and in computer science. This year, the award for best mathematics score went to Jennifer Middleton, and the award for best computer science score went to Sam Green. Congratulations!

Academic Achievement Awards

The annual Academic Achievement Award in Computer Science was awarded to Sam Green. No award was given this year in mathematics.

New Software

A site license for the *Geometer's Sketchpad* was purchased this year. Plans are to use the software in College Geometry, in Mathematics for the Liberal Arts, and in the teaching methods course.

A grant was obtained from the Michael Margaretha Sattler Foundation for three additional copies of the PC version of *Mathematica*.

New Minor

A minor in mathematics with statistics emphasis was recently approved. Course changes made in order to introduce this minor include changing the title of Statistics II to Statistical Methods, the addition of an entry-level statistics course that is at a higher level than the current introductory course and is designed for the major or minor, and the addition of a senior-level course entitled Mathematical Statistics. The minor will consist of the three courses just described, as well as two semesters of calculus and one elective from a list of four mathematics and computer science courses. Although the

minor is not available for mathematics majors, they may still take the courses.

New Faculty

Two new faculty joined the department in August 1998. Mr. Steve Brinton is an assistant professor of computer science and Dr. Bryan Dawson is an associate professor of mathematics. Dr. Dawson holds a B.S. in mathematics and computer science and an M.S. in mathematics from Pittsburg State University, and a Ph.D. in mathematics from the University of North Texas. He comes most recently from Emporia State University, where he was on the faculty for several years. Dr. Dawson's wife is a homemaker and homeschools their three children, Matthew, 9; Patricia, 6; and Tiffany, 3. Mr. Brinton's biography was printed in the previous issue of this newsletter.

One temporary faculty member also spent the past year with the department. Mr. Terry Evans taught computer science, and will continue as a part-time faculty member during his retirement. Mr. Evans spent many years in both industry (Ford Motor Co.) and in teaching positions.

Laffoon Set to Return

Mrs. Pat Lafoon will return to our department in the fall after taking a one-year leave of absence due to family illness.

New Position for Britt

Mr. Tim Britt, who teaches for our department part-time (evenings), started a full-time position at Jackson State Community College this last year. He was previously employed by General Dynamics Ordnance Systems in Milan. He continues to teach courses for Union.

Former Faculty

Dr. Troy Riggs, former faculty member, can be reached at 3304 Kerry Dr., Rapid City, SD 57702 or magi6@enetis.net.

Chaplain Hail

Mr. Chris Hail has been named team chaplain for the West Tenn Diamond Jaxx

baseball team. Please be in prayer for Mr. Hail in his ministry to the team.

KME News

Dr. Bryan Dawson will be the corresponding secretary for the Tennessee Gamma chapter of Kappa Mu Epsilon beginning this next year. He has recently completed his term of service (1995-1999) as editor of *The Pentagon*, the official journal of Kappa Mu Epsilon. Dr. Dawson continues to serve KME on the national level as KME's liaison to Pi Mu Epsilon, the other national mathematics honor society.

Dr. Lunsford will continue as faculty sponsor.

Promotion

Dr. Matt Lunsford has been promoted to associate professor. Congratulations!

Lunsford Honored

Dr. Matt Lunsford was honored by the university with a 1998 Innovative Teaching Award for "An Innovative Capstone Course for Mathematics Majors." The award is given by the Center for Faculty Development.

In addition to the above honor, Dr. Lunsford was also selected as a reviewer for the 4th edition of *Linear Algebra with Applications* by Gareth Williams, and as an item writer for the ETS/CLEP examination in trigonometry.

Faculty Attend and Present at Mathematics Meetings

Two members of the department attended the Joint Meetings of the American Mathematical Society and the Mathematical Association of America in San Antonio, January 13-16. Dr. Bryan Dawson presented the paper "An Algorithmic Version of Kuhn's Lone-Divider Method of Fair Division." Mr. Don Richard attended the short course "Exploring Abstract Algebra Through Interactive Labs with Mathematica." Mr. Tim Britt also attended.

Dr. Bryan Dawson, Mr. Richard Dehn,

Mr. Dwayne Jennings and Dr. Matt Lunsford attended the 78th annual meeting of the Southeastern Section of the Mathematical Association of America, hosted by Rhodes College in Memphis, March 12-13, 1999. Dr. Bryan Dawson presented the paper "Some Thoughts on the Philosophy of Probability with Application to Confidence Intervals and Theology." Dr. Lunsford presented "An Innovative Capstone Course for Mathematics Majors" and attended the Project NExT workshop.

Mr. Chris Hail attended the National Council of Teachers of Mathematics Regional Meeting in Little Rock, Arkansas, October 30, 1998. Two recent graduates, Ben Hickey, a middle school teacher in Crockett County and Michael Adams, a high school teacher in Humboldt, traveled with Mr. Hail.

Dr. Dawson attended the Thirty-Second Biennial Convention of Kappa Mu Epsilon in Lakeland, Florida, April 22-24, 1999.

Dr. Lunsford attended the Conference on Algebra, March 28-30, 1999 at Tulane University, which was held in honor of Dr. Laszlo Fuchs (Dr. Lunsford's dissertation advisor), on the occasion of his 75th birthday. Dr. Lunsford chaired a contributed paper session at the meeting.

Computer Science Faculty Attend Courses and Meetings

Computer science faculty attended two different courses this year that are designed as preparation courses for MCSD certification. Dr. Jan Wilms, Mr. Steve Brinton, and Ms. Stephanie Edge attended "Mastering Distributed Application Design and Development using Microsoft Visual Studio 6," October 6-8, 1998; Dr. Wilms and Mr. Brinton attended "Mastering Web Application Development using Visual InterDev 6," April 12-16, 1999. Both courses took place in Memphis.

Two faculty attended IBM workshops this year. Dr. Jan Wilms participated in "Advanced Java Programming" in Orlando, November 30 through December 4. Ms. Stephanie Edge attended "Java

Programming" in Atlanta on the same dates.

Dr. Wilms, Mr. Brinton and Ms. Edge attended the Mid-Southeast ACM Conference in Gatlinburg, TN, November 12-13, 1998. Dr. Wilms was a judge of graduate student papers and a session chair.

Faculty Publication

Dr. Bryan Dawson's article "Using Graphs to Analyze Sports Drafts" was published in the Spring 1999 (volume 11 number 2) issue of the *Missouri Journal of Mathematical Sciences*, pp. 73-79.

More Faculty News

Ms. Stephanie Edge has continued her

work on an M.Div. degree this past year, and is also taking courses this summer.

Mr. Chris Hail is continuing work on his dissertation. He conducted his study and gathered data at Tigrett Middle School in Jackson during this academic year. He is now in the process of writing.

KME Initiation

KME held an initiation banquet on April 15, 1999 at the Old Country Store. Those initiated were Melissa Culpepper, Sam Green, Aaron Hardee, Andrew Nichols, Frederic Palmliden and Sarah Shaub. The after-dinner speaker was Julie Jones (Mathematics and History '94), who spoke of her experiences in engineering school and at Porter Cable.

The last order of business was election and installation of officers. The new officers are Lindsey Crain, president;

Cathie Scarbrough, vice president; Melissa Culpepper, secretary; and Sarah Shaub, treasurer.

ACM Officers Elected

ACM officers for the coming year are Aaron Hardee, president; Calvin Allen and Scott Johnson, vice presidents; Mary DeVan Hammond, secretary; and Clifton Sain, treasurer.

Alumni News Wanted!

Please tell us what you are doing! We would love to hear from our alumni, and would like to print what you are doing so that your friends can keep up with you. Contact your favorite professor or email Dr. Dawson at bdawson@uu.edu.

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Y2K! Not the End of the World

Terry Evans, Instructor of Computer Science

The prudent see danger and take refuge, but the simple keep going and suffer for it.

---Proverbs 27:12

Some people have a unique solution for the Y2K problem. One of the solutions is to give three weeks of COBOL training to people on welfare. Another suggestion was to reboot all the computers at once! DUH!!! Another suggestion was to roll the clocks up to 2100 and another said go back to 1900. Well, what about those two 00's? Another suggestion was to agree it is 1999 all over again. Some have said it will be no big deal, computers fail all the time. Therefore, if everything fails at once it will be no different! And lastly, extend the 1/1/2000 weekend to the following Monday. That extra day will be a miracle day, and everything will be fixed.

It all boils down to this: if you can't fix every computer in a system, then you cannot be sure of the system. It's not good enough to make your individual computer Y2K compliant. You must make every computer in the system Y2K compliant, or your data will be contaminated. We have become worshipers of technology. Deuteronomy 8:17 says "You may say to yourself, 'My power and the strength of my hands have produced this wealth for me.'" What will be the results? We do not know positively whether we will crash totally, or just have a bump in the road. Will there be jobs? Well, since I know I won't be employable in 2000, I am not worried (well, not too much). **A prudent person will make some plans even if nothing happens.**

What to do?

1. Pray that your thinking and planning will be governed by the will of God and not man. Get close to God. Hope for the best and plan for the worst.
2. Get out of debt.
3. Get a hard copy (printout) of all your important records and facts of your life. Electronic records and databases may be disrupted, dislocated, or destroyed. Be careful where you store them. Some bank vaults are date sensitive. Have copies of birth and marriage certificates, social security cards, proof of ownership of items, loan agreements, current credit card statements (if you are not out of debt), and tax returns (in case the IRS is still functioning). It is better to have too many records than to overlook one important one.
4. Have some water and food stored, minimum 1 gallon per person per day. Have extra for neighbors.

Remember that this deadline is non-negotiable. It is coming on schedule! This could be a great opportunity for ministering the word of God to your neighbors. We need to prepare for the hurting and hungry that will come if this worst-case scenario happens.