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# *Union University Mathematics and Computer Science Newsletter*

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Spring/Summer 2000 ♦ Issue 5

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## **Senior Computer Science Major in Fatal Accident**

We regret to report that senior Computer Science major Melissa Ann Moore died in an automobile accident on July 29, 2000. Melissa was a passenger in the automobile traveling on I-40 in Haywood County near Brownsville. She is survived by her father, Homer Moore, of Jackson. Melissa's mother, Patsy Moore, had died from lung cancer two weeks earlier.

## **Student Wins Award**

Lindsey Crain's presentation "The Mathematics of Music" won a "top two" award (no distinction was made between first and second) at the North Central Regional Convention of Kappa Mu Epsilon, held April 7-8, 2000, in Atchison, KS. Lindsey's paper was the result of her senior seminar project, directed by Dr. Matt Lunsford. This is the second time in three years that one of Dr. Lunsford's seminar students has won such an award. Students Andy Nichols and Cathie Scarbrough, as well as Dr. Bryan Dawson, also attended the convention.

## **Student Presentations**

This year saw the largest graduating class of CS majors — eleven students (two of whom graduated in December). Five of these students gave a presentation at the Fall Conference of the mid-southeast Regional ACM chapter in Gatlinburg (November 11-12, 1999) as part of their senior seminar: Brandy Faughn and Elvis O'Chieng, "Data Access: A Web-Based Approach;" Aaron Hardee, "Union's Newest Electronic Guard Dog;" Brad Seaton, "LabVIEW Working Environment: The Pros and Cons;" and Collie Strain, "CGI: A Link to the Past."

## **Students Participate in Programming Contest**

The annual ACM programming contest was held at Murray State University in November. Union sent two teams: the Java team, which consisted of Brian Glas, Scott Johnson and Elvis O'Chieng, and the C team, which consisted of Tim Newell, Wes Plunk and Aaron Hardee. Both teams fared well, placing third and fourth, respectively.



## **Student Awards**

Two new awards were initiated by our department this year. The First Year Programming Award is awarded to a first-year student in computer science. The first recipient was Amy Miller. The names of the recipients are engraved on a plaque that now hangs in the departmental area. The Wolfram Award in Computational Science is awarded to a freshman calculus student, majoring in mathematics, who demonstrated outstanding achievement, enthusiasm, ingenuity and creativity in mathematics. The award consists of a lifetime copy of *Mathematica*, a framed award and a t-shirt, all donated by Wolfram Research, Inc. The first recipient was Caroline Ellis.

Other ongoing departmental awards for this year include:

First place in major field achievement test:

Mathematics: Lindsey Crain

Computer Science: Calvin Allen

Academic Excellence Medals:

Mathematics: Lindsey Crain

(fall), Sarah Shaub (spring)  
Computer Science: Elvis O'Chieng  
(fall), Brandy Faughn (spring)  
Computer Information Systems:  
Erica Shankle

## **Students Present Senior Seminar Projects**

Students in both the mathematics and computer science seminars presented their senior seminar projects at separate colloquiums this year. Some students also presented their projects at meetings, as reported elsewhere in this newsletter.

Mathematics presentations and titles were Melissa Culpepper, "M.C. Escher: Artist or Mathematician?"; Tiffany Johnson, "Realizing Strategies for Games and Puzzles"; Fred Palmlden, "Calculus in Business"; Beverly Lewis, "Mathematical Models of Epidemics"; and Lindsey Crain, "The Mathematics of Music".

Computer science presentations and titles were Calvin Allen, "Searching for my Professor: Creating a Useful Schedule Card"; Dixie Bartholomew, "Development of Salary Grades using JDBC"; Keeley Woods, "From Paper to Pulses: Electronic Time Cards"; Collie Strain, "A Link to the Past: Creating a Graphical Front End for an Existing Turbo Pascal Program by Interfacing with a Newer Language"; Aaron Hardee, "Union's Newest Guard Dog: Programming Smart Card Readers for Security Purposes"; Brandy Faughn, "Data Base Goes Artistic"; Alicia Hite, "From Stone Age to Electronic Age: Small Business Gains Efficiency with New Database"; Elvis O'Chieng, "Helping the Helpdesk: A Web-Based Approach"; Nathan McCrum, "Interactive Art"; Brad Seaton, "Analysis of Analog Input using LabView"; and Mary Devan Hammond, "ACM Web Page: Alumni Keeping in Touch".

## ***4<sup>th</sup> Annual Science and Mathematics Alumni Conference***

As part of the homecoming festivities, the departments in the science and mathematics areas hosted the 4<sup>th</sup> Annual Science and Mathematics Alumni Conference on February 18, 2000. The activities started at 2 pm and concluded with an alumni dinner 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 from our areas of study included Johnny Earnest ('98 Computer Science), Hewlett-Packard; Sherry (Blankenship) Hinson ('93 Computer Information Systems), Union University; Phillip Scott ('71, Mathematics), Jackson Central-Merry High School; and Julie Jones ('94 Mathematics), Porter Cable.

## ***Computer Science Curriculum Changes***

The department of computer science has revamped its curriculum to make it more reflective of the needs of industry – thanks in part to suggestions from alumni. The major has increased from 38 to 41 hours, with new courses like *Ethics*, *Web Development*, and *Formal Languages*, with an increased emphasis on a solid mathematics foundation, a revamping of the introductory classes and a de-emphasis of topics such as assembler and Cobol.

## ***New Major: Digital Media Studies***

Together with the departments of Art and Communication Arts, the Computer Science department has introduced a new major, Digital Media Studies. This interdisciplinary major has a computer science track for students who want to pursue a career of web master with a solid technical, artistic, and content-development background.

## ***Pat Laffoon Retires***

Mrs. Pat Laffoon retired from the computer science faculty at the end of the spring semester. Mrs. Laffoon began teaching at Union in 1986. See the end of this newsletter for an article by Mrs. Laffoon. She will be missed!

## ***New Faculty (Sort of)***

Dr. Troy Riggs has been re-hired as an Associate Professor of Mathematics, beginning the Fall 2000 semester. He spent the past two years in Rapid City, South Dakota working as an actuary. Dr. Riggs was originally with the department from 1993 to 1998. Welcome back!

Mr. Terry Evans has been brought out of retirement for a one-year position in computer science. He previously worked for Union full-time in the 1998–1999 academic year, and part time this last year. Welcome back!

## ***Hail Finishes Doctorate***

Dr. Chris Hail completed his Ed.D. in Curriculum and Instruction at the University of Kentucky in May, 2000. His dissertation was "The Effects of Multiple Representations on Student Understanding of Basic Algebraic Concepts." Dr. Hail gave a talk by the same name in Union's Department of Education Colloquium Series, May 1, 2000. Congratulations!

## ***Edge Finishes Seminary Degree***

Ms. Stephanie Edge completed her M.Div. degree from The Southern Baptist Theological Seminary in Louisville, KY, May 2000. Ms. Edge is now one of five departmental faculty with two master's degrees. Congratulations!

## ***Faculty Promotions***

Dr. Matt Lunsford is now the Associate Dean of Arts and Sciences. This position is half administrative and half faculty, so Dr. Lunsford is still considered one of our own. Dr. Lunsford also received tenure this year. Dr. Bryan Dawson has assumed Dr. Lunsford's previous role as

Mathematics Discipline Coordinator. These changes took place at the beginning of the 1999–2000 academic year. Congratulations to both of these fine faculty!

Dr. Chris Hail has been promoted to Associate Professor of Mathematics. Congratulations!

## ***The Stork Comes Again***

Dr. Chris Hail and his wife Kelli are the proud parents of their third child, Kelsey Paige Hail, born March 11, 2000. She weighed 7 lb. 6 oz. and was 21" long at birth. Congratulations!

## ***Mathematics Faculty Attend and Present Talks at Meetings***

Dr. Bryan Dawson was the banquet speaker at the North Central Regional Convention of Kappa Mu Epsilon, held April 7–8, 2000, in Atchison, KS. Dr. Dawson's presentation was entitled "KME Student Scholarship — 1931 to the Present". Dr. Matt Lunsford and three students also attended the meeting.

Dr. Matt Lunsford and Dr. Bryan Dawson attended the Southeastern Section meeting of the Mathematical Association of America. Dr. Lunsford participated in the Project NexT-SE (New Experiences in Teaching) workshop, and presented "Undergraduate Research in a Senior Seminar Course" and "Activities from Abstract Algebra" as a part of the workshop. Dr. Dawson presented "Logarithms: Exponentiation→ Multiplication, Multiplication→ Addition, Addition→?" and took the short course "Introduction to Mathematical Card Tricks".

Mr. Richard Dehn attended the annual conference of the Tennessee Mathematics Teachers' Association, April 28–29, 2000, at the University of Tennessee in Knoxville. The purposes of that convention are to present awards to the winners of the state-wide student mathematics contest and to discuss topics and issues in mathematics education.

Mr. Don Richard attended the annual joint meetings of the American

Mathematical Society and the Mathematical Association of America, held in Washington, DC, January 19–22, 2000. He took a Linear Algebra short course at the meeting and represented our department in recruiting efforts, attending the Employment Register.

Mr. Dwayne Jennings completed a National Science Foundation sponsored short course in the summer of 1999 on Applied Calculus at Christian Brothers University in Memphis. The course was developed by the Calculus Consortium at Harvard University and taught by Prof. Patti Frazier Lock of St. Lawrence University.

Mr. Dwayne Jennings and Mrs. Becky Jennings participated in the *Mathematica* Developers Conference. The conference was held October 21–23, 1999, at Wolfram Research, Inc., Champaign, IL.

Mr. Dwayne Jennings, Mrs. Becky Jennings, Dr. Matt Lunsford and Dr. Bryan Dawson attended the first annual Tennessee Mathematics Dinner, sponsored by the Southeast Section of the Mathematical Association of America, held on February 26, 2000, at Vanderbilt University in Nashville.

### ***Computer Science Faculty Attend Meetings and Take Courses***

Dr. Jan Wilms represented Union University at the Council for Christian Colleges and Universities' *Technology Conference* at Seattle Pacific University during June 1999. The conference was hosted jointly with the CCCU's Communication Officers professional organization and focused on the use of the web for marketing and technology in Christian higher education.

Mr. Steve Brinton took the computer animation class at the Renaissance Center in Nashville over the Christmas holidays. The class centered around using 3DMAX, a very popular high-end animation package. Says Mr. Brinton, "I

only need to find the time to sit down and pursue my interests in creating the next Toy Story."

Ms. Stephanie Edge took the course "Java Programming using *Visual Age for Java*" in Atlanta, October 18–22, 1999. The department is considering a switch to *Visual Age* for its Java courses.

Mrs. Pat Laffoon, Dr. Jan Wilms, and Mr. Steve Brinton attended the ACM Mid-Southeast Chapter Fall Conference November 11–12, 1999, in Gatlinburg, TN. Mrs. Laffoon served as a session chair at the conference. Several students gave talks, as reported elsewhere in this newsletter.

### ***Faculty Give Colloquium Talks at Union***

Dr. Jan Wilms presented "*Creating an on-line Curriculum Map: Using advanced spreadsheet features as a planning / monitoring tool.*" The talk was aimed both at faculty wanting to learn about some powerful spreadsheet features such as pivot tables and filters, and at chairs who can use Excel to assist in budgeting, evaluation and scheduling.

Dr. Bryan Dawson presented "Coin Flips, Confidence Intervals and Theology" on September 30, 1999. The talk centered on two philosophies of probability and their application to understanding the "free will" vs. "predestination" debate.

### ***Other Faculty News***

Mr. Don Richard continued his role as statistician for Union athletic teams, and as statistician and/or scorekeeper for the NAIA Women's national tournament in Jackson.

Dr. Chis Hail is still serving as Chaplain for the West Tenn Diamond Jaxx, the AA affiliate of the Chicago Cubs.

Tommy and Nancy Tucker and their children are serving as Southern Baptist

missionaries to Indonesia. Tommy is the son of Dr. Joe Tucker.

Dr. Jan Wilms was a panelist on the May 26 edition of *Crosspoint*, Union's weekly radio program. The topic addressed was "*Bridging the Digital Divide*": the growing role of computers in our culture and the divide between haves and have-nots.

### ***Alumni News***

Among the recent graduates whose jobs are known to the newsletter editor are: Brandy Faughn, Autozone  
Elvis O'Chieng, Union University  
Aaron Hardee, Union Planters Bank  
Brad Seaton, Union University  
Keeley Woods, Price Waterhouse  
Mary Hammonds, MBA (Memphis)  
Melissa Culpepper, Humboldt H.S.  
Lindsey Crain, Univ. Sch. of Jackson

Alumnus Kristen (Langford) Simpson and husband are doing full-time missionary work in Azerbaijan.

### ***KME News***

Dr. Bill Dembski of the Discovery Institute spoke to KME on February 29, 2000. Initiation was held April 11, 2000, at the Old Country Store; Mike Adams ('98) spoke about his experiences at Humboldt High School, and eight new members were initiated. An end-of-the-year get together held jointly with ACM took place at the home of Dr. Wilms.

### ***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](mailto:bdawson@uu.edu).

### **VISIT**

[www.uu.edu/academics/coas/mathesc/](http://www.uu.edu/academics/coas/mathesc/)

## **Nerds, Geeks, and Dorks: Reflections of a Computer Scientist**

### **Mrs. Pat Laffoon**

What a shame that many intellectuals are labeled in this way! I have pondered this point and often think it is because many in today's society lack balance in their lives. Immersed in our work, both as students and faculty, we tend to forget that God gave us many gifts and intends for us to develop them to their fullest for His glory. He calls us into this field because we are Christians first and Computer Scientists second.

Our work is cut out for us! Enveloped in an information age, the world is becoming too high tech for its britches and lacks the 'high touch' that our Lord commands. Today's technology can indeed aid in the spreading of His Word, but also can aid the prince of darkness!

Donald Wildmon, in American Family Radio's article "American Family Association: why we fight pornography" <http://www.afa.net/wopcd.pdf> states:

"There is a great spiritual war being waged. An intentional effort is being made to change the very foundation on which Western civilization is built, to replace the Christian concept of man with a secular and humanistic concept. It is a philosophy of life that seeks to remove the influence of Christians and Christianity from our society. Pornography is not the disease, but merely a visible symptom; it springs from a moral cancer in our society, and it will lead us to destruction if we don't stop it.

The silence and apathy of the Christian community toward pornography must end. We simply must become educated and involved in this struggle. We must speak out. Our society has suffered too much already because of our silence."

This is just one example of how our field can take a bad rap. We must guard Ephesians 6 in our hearts and work diligently to be responsible Lights in an irresponsible world. I am delighted that the Department of Mathematics and Computer Science will be teaching an ethics course in the near future. I also am glad to learn that Union University plans to implement a filter on our system. Of course, on a broader scale, Christians have the perfect filter of the Holy Spirit within them. This power within us convicts us to obey Philipians 4:8.

Christian colleges and universities are served well by their computer science graduates. Union University certainly is no exception. Students have gone on to graduate school and/or the workplace equipped to be lights in this world. Their successes and testimonies continue to warm my soul. Union computer scientists are actively working in mission fields, their own churches, as well as in the business sector. It is important that we continue to educate Christians to serve in this field.

As many of you know, I am retiring this year. I do not like the term 'retiring'. It brings to mind 'putting away an old dog' or 'shooting a horse' or tumbling down the hill of old age at a rapid pace! I'm sure this may surprise some of my younger colleagues and students, but I don't think of myself in that way! I think they should call it 'sprung' instead. Not that my tenure at Union University has been imprisonment, but changes in computer science are very time consuming to study, learn, and implement in courses. As a professor, you must learn not only for yourself, but also for your students. My formal education taught me HOW to learn, but was not an end unto itself. I intend to continue my life long learning, but not because of tomorrow's lecture.

What a wonderful career I have had! I began teaching junior high mathematics after graduating from Lindenwood College in St. Charles, MO. I had taken one FORTRAN course at Lindenwood. Our coding forms were taken to McDonnell Douglas Aircraft and run on their computer. Do you see why I am a firm believer in designing your program before coding it? You were two weeks behind if that program failed to run when returned the Tuesday after turning it in on Thursday! Then there was the lovely COBOL run at the University of Memphis! Coding forms were submitted at a window. Punch card operators punched the cards before running your program. Hopefully these operators were accurate and your program was logically and syntactically correct! Before coming to Union in 1986, I taught at Jackson State Community College for seven years. Courses taught there included BASIC programming, Problem Analysis and Logic, A Survey of Computer Science, Business Math, Statistics, and College Algebra. In my fourteen years at Union University, I've taught Survey of Microcomputing Applications, Pascal programming, COBOL programming, C programming, Statistics, and Intermediate Algebra. I have enjoyed the past few years being exposed to Java and HTML programming. I have seen this field unfold from punch cards to the user-friendly applications that exist today. Needless to say, it has been exciting and far from boring!

Many have asked, 'Why are you doing this now?' and 'What are your plans?' or 'What will you do with all your time?' I am 'springing' because I believe it is God's plan for my life right now. I 'plan' to be careful about what I do my first year of 'freedom'. I will take some time for me and sporadically spoil my dear 'unsprung' husband. I will 'stop and smell the roses'; as well as pick some along the way! But, dear friends, you don't have to be 'sprung' to do this. JOY is a gift we are all given. However, some of us are better than others at embracing joy. My prayer for all of you is that you do just that — embrace JOY. I've never seen a light that didn't shine. Too often, dear Christians, we walk like we'd never been saved. I laughed at a Hallmark plaque given to me by a friend on my 'retirement'. It reads:

CLIMB a mountain. RIDE a bike. Sleep at any Time you like. PLANT a garden. Do some READI NG. Take up cooking. Take up EATI NG. Visit Paris. STUDY. RUN. You're in charge now — Do what's fun!

Don't you just love that? ? Students, former students, and colleagues, perhaps we all need to do some 'retiring' this summer. I pray that your lights will continue to shine and that you will embrace the life God has given you. Thank you for the privilege of serving Him with you. God bless each and every one of you!