



ALUMNI NEWSLETTER

SUMMER 2014

MATHEMATICS & COMPUTER SCIENCE
UNIVERSITY OF MISSOURI – ST. LOUIS

<http://www.umsl.edu/mathcs>

LETTER FROM THE CHAIR

Dear Alumni and Friends,

I am happy it's the time again to write you this letter. I hope you and your families are all doing well! After leaving the campus temporarily to work as a program director for three whole years at the National Science Foundation in the Washington DC area, I returned happily to the department last fall. It is so nice to come back home to be with my friends, colleagues, and students again. What a wonderful feeling! I would like to update you on some major events of the department during the last academic year.

We continued to take up the challenges and to excel in advancing our research programs, providing highest quality in teaching, and serving the campus and the communities. It was a particularly memorable year. Many things happened.



Keith Miller, the Orthwein Endowed Professor for Lifelong Learning in the Science of the College of Education and a computer scientist, has become a tenured member of the department. He taught a senior Computer Science course for the department in the past semester. Yuefeng Wu joined the department last fall as an assistant professor in Statistics. Yuefeng brought with him much-needed expertise in Statistics to the department with an emphasis in Bayesian non-parametric inference. The department has also been authorized to add two more tenured-track positions to the faculty, one of these positions will be in Mathematics and another in Computer Science. These new faculty positions will help strengthen the department in the area of Applied Mathematics with a focus on computation and data science and in Computer Science with a focus on cyber-security. In addition, the department is also to hire two Non-tenure track positions in Computer Science and Mathematics, respectively. As you can see, the department is adding new faces and energies and we all are very excited about it.

Ravindra Girivaru was promoted to Associate Professor with tenure last spring. This is a well-deserved promotion attesting to Ravindra's excellence in research, teaching, and service. This is also the year in which our department members' outstanding performance got recognized on the campus and in the College. Kimberly Stanger won the prestigious 2013 Chancellor's Staff

Excellence Award, a long overdue award in recognizing her twenty-five years of consistently outstanding performance. Qiang Dotzel received this year's College of Arts and Sciences NTT Faculty of the Year award for her performance in and contributions to teaching and service for the department, the college, and broader communities.

Charles Chui, a Curator's Professor of the University of Missouri System and a world renowned expert in approximation theory and applied mathematics, retired in August after many years' service to the department and the university. He will be a Founder's Professor of the university and will remain active in advising PhD students and running his even more exciting research projects after his retirement. Charles joined the department in 2003 and was a Distinguished Professor at the Texas A&M University before that. During his remarkable career, Charles published nearly 30 books and over 350 papers covering a wide range of areas in mathematics. He received numerous awards and honors and is highly respected by his colleagues in the department and around the world.

The department continues updating and enhancing its curriculum. This year, in addition to many changes, we added two new "2+3" programs, the BS and MS Dual Degree in Computer Science, and the BA/BS and MS Dual Degree in Mathematics. These degrees allow student to concurrently earn credit for some graduate courses while working on their undergraduate degree, reducing the total hours needed for the subsequent MS degree. We are also working to increase the number of elective courses for the CS undergraduate program. We are very happy to see that the enrollment of the CS program has been steadily increasing in the past several years.

Finally, this is the year we said goodbye to our long-time colleagues and dear friends, Grant Welland and Shiyong Zhao. Grant joined the department in 1971. In the early decades of this young university he contributed to its intellectual life in many significant and lasting ways, including his efforts that led to the creation of the Master's and PhD programs in Applied Mathematics in the department. In the later years, as Professor Emeritus, he continued to be active in collaboration with colleagues on research projects. Grant died in a tragic accident while traveling in a remote area of the Canyonlands National Park in July 2013. Shiyong joined the department in 1991. He was a hard-working mathematician and a wonderful teacher. During the twenty-two years with the department, he had come to be an essential and irreplaceable member of our faculty. Shiyong died unexpectedly at his home last November.

Emily and her committee are putting together a wonderful newsletter for you. I hope you will enjoy it, and don't forget to join us at the upcoming picnic held at the beginning of the fall semester and a hike during the fall season if you can.

With all my best wishes,

Haiyan Cai

IN MEMORIAM

The Department of Mathematics and Computer Science lost two valuable members in 2013. We hope you will join us in fondly remembering them.



Grant Welland earned his PhD in Mathematics from Purdue and after professorships at DePaul University, the University of Madrid, and Purdue, joined the Department of Mathematics and Computer Science in 1971. His area of study was analysis and even into his retirement he continued to collaborate with colleagues while also pursuing his other passions, photography and nature. Dr. Welland passed away in July 2013 as the result of a hiking accident in Horseshoe Canyon, a remote area north of Canyonlands National Park in Utah.

Shiying Zhao grew up in Shanghai, China and earned his PhD in Mathematics from the University of South Carolina. He joined the Department of Mathematics and

Computer Science in 1991 and promoted to associate professor in 1997. He served as Math and Computer Science Graduate Director for the department for many years and held visiting positions at both the Mallinckrodt Institute of Radiology at Washington University School of Medicine and the Department of Radiology at the University of Iowa. Dr. Zhao passed away in November 2013.



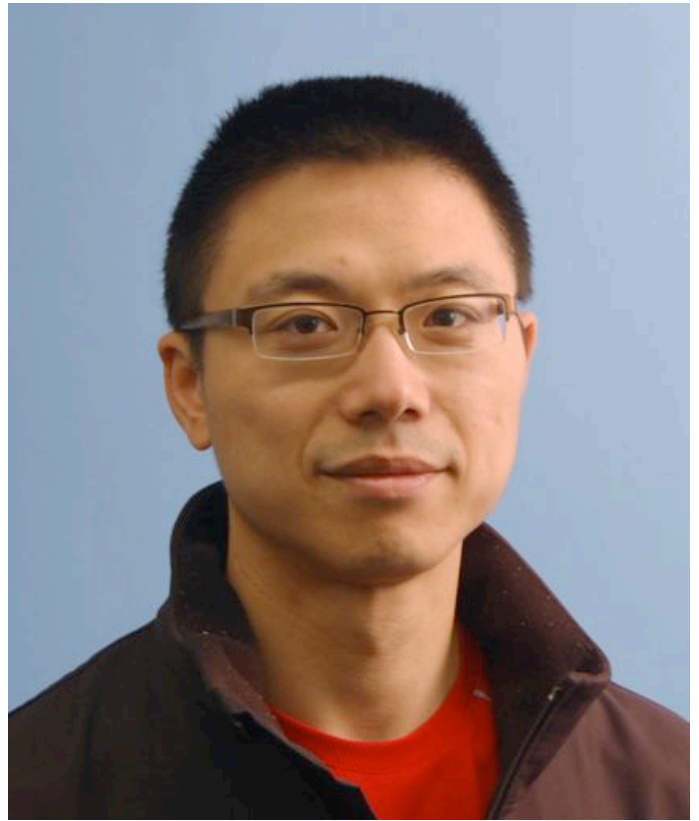
Assistant Professor Nevena Marić enjoys a lovely spring day by holding her Applied Statistics class outside. Photo by August Jennewein.

WELCOME OUR NEWEST FACULTY MEMBER

Yuefeng Wu is originally from Nantong, Jiangsu, China. He came to the United States as a graduate student and earned two masters degrees, one in financial mathematics from Florida State University and the second in statistics from the University of New Orleans, before receiving his PhD from North Carolina State University. He then was awarded a post-doc at Cornell before coming to UMSL this past fall.

Yuefeng has specialized in statistics, more specifically in Bayes data analysis and Bayes nonparametric methods. His research has practical applications across many disciplines. He is currently working on a machine learning project with NASA to construct the next generation Air Traffic Control System.

Outside of his statistical world, Yuefeng is married and has two young girls. He enjoys reading and swimming, along with many other hobbies. We are so excited to have him as a new member of our department.



AWARD WINNERS

Administrative Assistant Kimberly Stanger received the 2013 Chancellor's Award for Excellence in Office and Technical Support. She is pictured below, left, at the award reception, along with Emily Ross and Raina Traore-Gress.



Associate Teaching Professor Qiang Dotzel won the 2013 College of Arts & Sciences Non-tenure Track Faculty Member of the Year Award. She is pictured here with Dean Yasbin and Associate Dean Thiel.

CHRIS GUND

Chris Gund graduated in 1990 with a BS in Computer Science. This May, he started a new job at Keefe Group as a Solutions Architect after more than 20 years in a software development role. Chris and his oldest son Erich have attended every Andalaft Memorial hike since we first introduced them in 2008. This year we were also joined by his wife Kristie and youngest son Nathan.

It is with great fondness that I reflect upon my years in the UMSL Math and Computer Science Department. And that is largely attributable to the patience, generosity, sense of humor and encouragement of Dr. Andalaft. Were it not for his influence and support it is very likely I would not have weathered the demands of the required math classes and would not have gone on to complete an MS degree at Washington University in computer science.



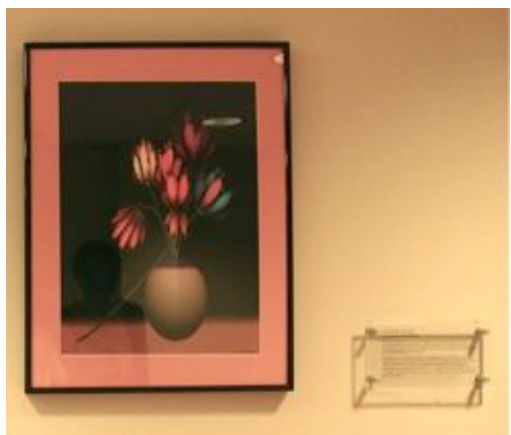
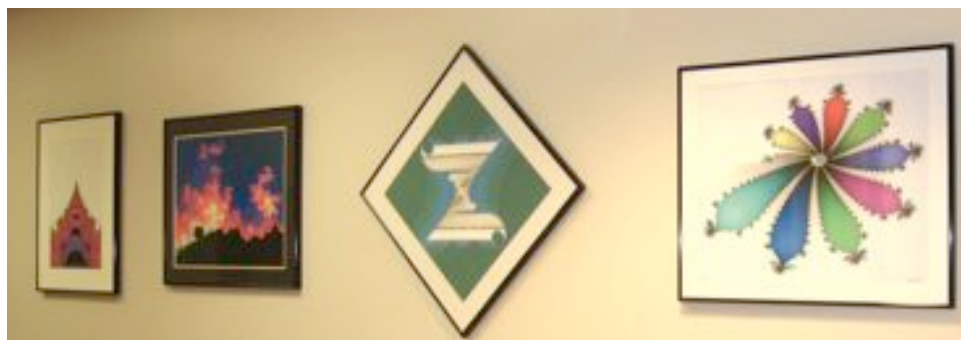
Even after graduation Dr. Andalaft continued to support and encourage my cultural, educational and professional interests. And because of him I continue to maintain a connection with old friends in the Math and CS Department through the annual Andalaft Hikes at Castlewood State Park.

The problem decomposition, analysis and synthesis skills taught in the Math/CS curriculum have served me well for many years as a software developer on engineering, bioinformatics and business application projects. And these skills will continue to serve me well in my current transition to a software architect.

RAY BALBES GALLERY

While interim chair of the department, Prabhakar Rao was instrumental in creating the Ray Balbes Gallery in the lobby of our department. He writes about the collection below.

When Rich Friedlander, as Chair from 2010 to 2012, finished refurbishing the common areas in the department on the third floor of Express Scripts Hall, a long wall opposite the elevator seemed to be the ideal location for artwork.



We approached Ray Balbes (Chair of the department from 1993 to 2002 and currently retired to California) who is an accomplished artist. Ray donated some of his work, and the foyer is now a colorful place as students, faculty and visitors enter the department. Along with his research in lattice theory in mathematics, Ray developed an interest in computer graphics and the creation of images. Towards the end of his career at UMSL, this interest had flowered into an art form. In his art, Ray explores the natural complexities and symmetries of fractal constructions in mathematics to produce images that surprise and please. Each of the images in the foyer was formed using iterative mathematical calculations and an overarching artistic vision and leads its viewers to appreciate this merging of mathematics, computer science and art.

SOCIAL HAPPENINGS



**Welcome Back Picnic
Shaw Park
September 2013**



**Andalafte Hike
Castlewood Park
October 2013**



End of the Semester Happy Hours
Three Kings – December 2013
Blueberry Hill – May 2014



Pi Day 2014 Activities
Sponsored by the Math Club

Pi Day Winners:
Omar Ismail (Pi Reciter), right
Sean Horan (Pie Eater), below right

Photos by Heather Welborn



Get social with us!



@UMSLMathCS



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Computer Science major Garret Bynum presents the app he developed for Android at the Undergraduate Research Symposium, sponsored by Golden Key International Honour Society, UMSL, May 2014

SCHOLARSHIPS

Congratulations to all of our 2014 recipients!

Andalafte Memorial Scholarship

Asma Al-Amery

Raymond and Thelma Balbes Scholarship

Ramin Melikov

Boeing Company Scholars Program

Muris Fazlic Andrew Vogel

Computer Science Scholarship

Eryn Cantrell

Mathematical Sciences Alumni Scholarship

Joshua Bixby Asma Al-Amery Dan Gray
 Timothy Hebel Barry Hykes Brett Lindsay
 Loc Nguyen Rachel Petzoldt Andrew Santon

Joseph M. and Mary A. Vogl Scholarship

Sarah Hamel

WE NEED YOUR GIFT!

If you would like to make a donation to the department please fill out this form and mail it to:

University of Missouri – St. Louis
 Department of Mathematics & Computer Science
 307 Express Scripts Hall (MC 61)
 One University Boulevard
 St. Louis, MO 63121-4400

Enclosed is my gift of

\$5000 \$1000 \$500 Other \$_____

Direct my gift to the department's greatest need

I prefer to designate my gift to undergraduate scholarships

I prefer to designate my gift for graduate fellowships

I prefer to designate my gift for _____

NAME _____

ADDRESS _____

MATH COMPETITION

The **Andalafte Mathematical Competition**, sponsored by the Department of Mathematics and Computer Science, was instituted in 2006 to inspire an attitude of scholarship and excellence in mathematics. The exam is accessible to students having a preparation of at least Calculus II. Three prizes are offered. The winners of the 2013 competition were Yifei Xu (First Place), Jere Duhon (Second Place), and James Michael Wade (Third Place).

ALUMNI SPOTLIGHT

This year we asked you to provide us with a more in-depth look at your lives and careers post-graduation. This is valuable information, not just for new alum, but also for our current students, who are interested in learning about the paths our graduates have taken. Many thanks to those alumni who were willing to share!

STEPHEN ABRAMS

MS Computer Science, 2009

I've worked in telephony and financial services since graduating, but I currently do data mining for an insurance company. I work in my hometown of Louisville, KY.

The work I do centers around building predictive models and text-mining medical records to find undocumented diagnoses for our members. This is what is commonly referred to as 'big data'. I find it very interesting and I get to work with a lot of very smart people with advanced degrees in math, data mining, and computer science.

Interestingly, I spent a lot of time studying genetic algorithms with Cezary Janikow and Uday Chakraborty, which is typically considered a form of data mining, and which I feel very much prepared me for this work.

PAM HAGER

MA Mathematics, 1979

Soon after receiving my MA I looked for a job in industry because I wanted to try something different from teaching junior high school (7th through 9th grade) mathematics. It was not that I didn't like it, I just wanted to try something new. I landed an engineering job at McDonnell Douglas because of my MA in Math. I was a cost analyst on the cruise missile project – but this was not challenging enough for my blood. My MA in Math next allowed me to secure a teaching position at the College of the Sequoias in California; one of my best career moves ever. I taught all levels of math - basic algebra through calculus.

Wanderlust pulled on me once again and I studied financial planning/investments; I received my Certified Financial Planner CFP and landed a job

back in St. Louis. My math background served me well in understanding financial formulas and the HP financial calculator. After a few years in a very down market, I chose to look for something new. That landed me back at McDonnell Douglas in the Information Systems area teaching their software development methodology, STRATUS. My training experience and ability to learn new things provided the tools to do this new assignment.

As a master trainer for McDonnell Douglas I learned the nuances of being a contract trainer, then left there to go out on my own for 11 years. It was a wonderful 11 years until 9/11 and all my work vanished almost overnight. Needing a job to pay the bills I turned to an on-line resource and found my current job with Psychological Associates. I started in 2002 as an instructor/facilitator and workshop designer. Today I do that and head up to Learning & Development department. My title is Vice-President, Instructional Design.

Three years ago I started my Ph.D. in Education - Specialization, teaching mathematics teachers. I graduated this January from Capella University. One day I hope to deliver online training as well as in-person teaching for a university.

2013 – 2014 PhD RECIPIENTS

Mark W. Hauschild

December 2013

Dissertation Title: Using Prior Knowledge and Learning from Experience in Estimation of Distribution Algorithms

Lihua (Tom) Li

May 2014

Dissertation Title: Basis Function Approaches for Two Dimensional Cochlear Models

JOHN HARRIS

BS Applied Mathematics, 1984

I have had a long career with United Parcel Service (32 years), 25 of them with their Engineering Department. I have been relocated two times during my career (Portland, Oregon and Atlanta Georgia). I am currently a part of the UPS Corporate Engineering Department.

The UMSL program made the transition into an Engineering department very easy. The friends and contacts and networking were extremely valuable for getting my foot in the door with a corporate company and the rest is history.

MICHAEL RUBIN

BA Mathematics, 1968

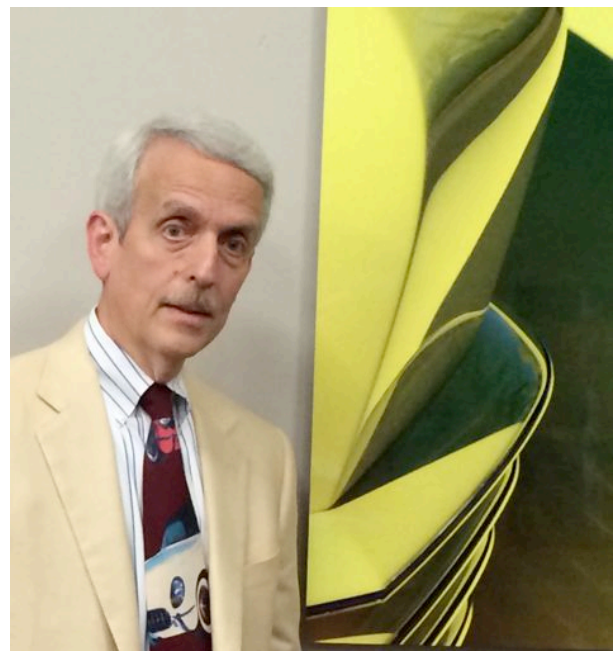
In 1968 I graduated from UMSL with a BA in Mathematics. One month later I was hired by the Department of Defense to be part of a new, 30-person organization being formed to automate the Department of Army logistics management system. The plan was that all thirty of us would go to the IBM school on Lindell Blvd. to be put through the 16-week Systems Engineering training program that all newly-hired IBM Systems Engineers received. Our office was in the Mart Building at 12th and Spruce, with satellite offices around the downtown area over the years. This was back when IT was simply known as Data Processing. Because I had a 'technical' degree I was classified at a higher pay grade.

After five years of software engineering for the DOD, I switched to the Military Industrial Complex by joining the Data Base Engineering team at McDonnell Douglas Automation Company (McAUTO). Three years later, I switched from designing and programming software to managing the teams who did all that. While at McAUTO I began my MBA program. With Silicon Valley in its heyday, my wife and I decided to move out there and see what life was like on the left coast. I began as Program Manager for the Amdahl Corporation Computer Center. My job was to be the liaison between the Data Center and all of our internal user groups. One year later in 1989, Amdahl decided to

move to a state-of-the-art computer center, and named me as the Program Manager for the effort. It took a year, but we completely refurbished a nearby building, implemented fiber optics networking between centers, and transitioned to the new site. A week after we shutdown the old facility, I received a President's Award from the Company, only the seventh such honor bestowed since the company was founded. I also completed my MBA while living there. Unfortunately, as business changed for Amdahl, they sold the data center to Yahoo!

We then decided to try the other coast, and I went to work for Fidelity Investments in Boston. I reported to the President of Brokerage Technology, managing 200 people in eight cities. Technology changes so fast that there was never a point where boredom was a threat! And Fidelity was (and still is) always looking for ways to execute trades faster and faster, so we never 'sat still'.

After ten years, we needed to 'come home' to be here for ailing relatives. The job opportunities for my level were slim, and I found myself moving between permanent IT positions and some contracting assignments. On June 30, 2013, I called it a career after 45 years with my UMSL BA in Mathematics degree still at the root of the whole thing. I'm now President of the Ambassadors of Harmony, volunteering where I can, and entering my photography in juried competitions as appropriate.



Michael Rubin pictured with one of his photos at the Kemp Auto Museum.

JOE C. RWEMA

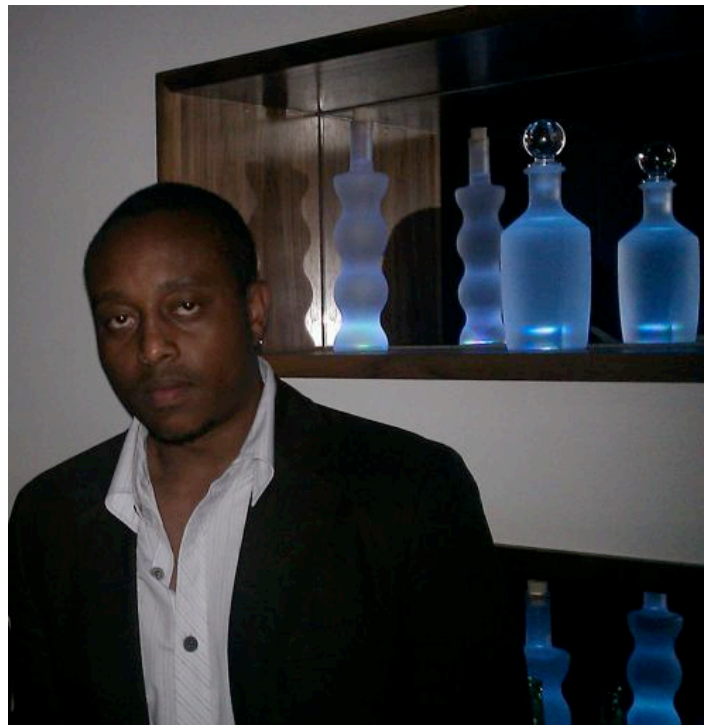
BS Computer Science, Minor in Mathematics, 2005

Since my graduation, my career has continued to evolve. I worked for Mercy Health Plans as an IT Consultant for more than 2 years, and then was a SQL Server Database Analyst at Scottrade, Inc for 4 years before I became a SQL Server Database Developer/ DBA at Stifel where I've been working since March 2014.

VICTOR WENDL

BA Mathematics, 1989

Victor Wendl, CFP®, ChFC, is president of Wendl Financial, Inc., a registered investment advisory firm located in St. Louis, MO. A magna cum laude graduate of the University of Missouri – St. Louis, Wendl holds degrees in both mathematics and business administration. After completing his MBA with an emphasis in finance at the University of Illinois – Champaign Urbana, Wendl worked at Prudential Financial Services where he provided financial planning and investment advice to both corporate and individual clients. He is both a Certified Financial Planner™ and a Chartered Financial Consultant. As president of Wendl Financial, Inc. he continues to emphasize the value investment philosophy when managing clients' assets.



My investment book is available for sale at the hyperlink below

http://www.amazon.com/Current-Asset-Value-Approach-Investing/dp/0985837527/ref=cm_cr_p_r_product_top



Andalafte Hike, Castlewood Park, October 2013