UMKC RooMath News

Department of Mathematics & Statistics Newsletter

http://cas.umkc.edu/Mathematics

News about our department

28 April 2008: The department had its Chair election this month, and Dr. Jie Chen was elected **Chair**. She was then approved by the Dean who recommended her to the Provost, who in turn appointed Dr. Chen for a three-year term starting July 1. Congratulations, Jie! We are grateful to and wholeheartedly thank **Dr. Peng** for his excellent work as Interim Chair this past year.

30 May 2008: We hear that Dr. Jie Chen is promoted to **Full Professor**. Congratulations, Jie!

July 2008: Dr. Kamel Rekab received a grant for $10,000 from the Johnson County Sheriff's Office.

18 July 2008: We hire Dr. Miron Bekker as a Visiting Assistant Professor for the 2008-2009 academic year. Welcome, Miron!

May 2009: Entire video courses of College Algebra and Calculus I are now posted at UMKC's YouTube EDU channel.

11 May 2009: Dr. Jie Chen has been awarded a research grant by the University of Missouri System's Regents Board (UMRB) to conduct research in statistical genetics from 11 May 2009 to 10 May 2010.

August 2009: We hire Dr. Fanglong Dong as a Visiting Assistant Professor for the 2009-2010 academic year. Welcome!

21 August 2009: We hear that both Dr. Eric Hall and Dr. Hristo Voulov have earned tenure and been promoted to **Associate Professor**. Congratulations, Eric and Hristo!
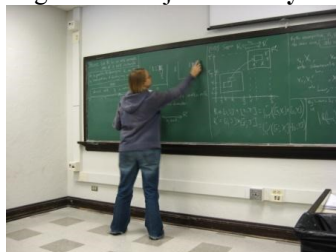

Inside this issue:

News about Student-Related Matters: talks, awards, publications, gatherings, mathematics competitions, and so on

12 March 2008: Several department Faculty, Adjunct Lecturers, graduate and undergraduate students, organized by our department HSCP Coordinator Becky Roberts, participated as problem writers, moderators, judges, computer operators, and runners in the **UMKC Math and Science Competition** for high school students and teachers, sponsored by the UMKC High School/College (HSCP) Partnership. Several faculty members, along with Adjunct Lecturers Ari Bavel, John Swartz, and Breanne Volkerding, graduate student Zhiyong An, as well as undergraduate students Vivian Bozikis, Cameron Buie, Nicholas Cale, Adam Ross, Evan Stone, and Mitch Terry represented our department.

17 March 2008: We learn that undergraduate major **Whitney Berard** [See **picture** at right.] is awarded a SEARCH grant to do undergraduate research with our own Liana Sega.

10 April 2008: We hear the good news that undergraduate mathematics major **Tracey Davidson** is a **finalist** for the fifth annual HOMSIGMAA (History of Mathematics Special Interest Group of the Mathematical Association of America) contest for papers written in History of Mathematics courses across the country. Congratulations, Tracey! In 2006, three of our department majors were finalists, and one won first place. We also won (or co-won) first place in both 2005 and 2004. Tracey's paper is titled "**Nicole Oresme: The Kinematics of Celestial Motion**." Her paper was written this Spring 2008 for Math 464 WI (History of Mathematics, Writing Intensive).

11 April 2008: Undergraduate major **Whitney Berard** presents a **poster** titled **"Graphs Based on Vector Spaces over Finite Fields"** at the eighth annual SEARCH Symposium for Research and Creative Achievements in Pierson auditorium, winning **First Prize** in the "Physical Sciences and Mathematics" Division. Congratulations, Whitney! Her **faculty mentor** is Liana Sega. [This award was also mentioned in a U-News article, April 28 issue, p.5, "UMKC Undergrads Show off

Research".]

[See **pictures**.]

22 April 2008: Today our M.S. in Mathematics GTA **Samantha Reynolds** was awarded a **2007-2008 Graduate Teaching Assistant Superior Teaching Award** at the School of Graduate Studies 18th Annual Awards Convocation. Hers is one of just five such awards given in the College of Arts and Sciences. Congratulations, Samantha! [Previously, on 4 May 2006, our then GTA **Breanne Volkerding** won the same award.] [See **pictures**]

Help us go Green! Please join the Alumni e-mail list to receive newsletters by email! www.umkcalumni.com
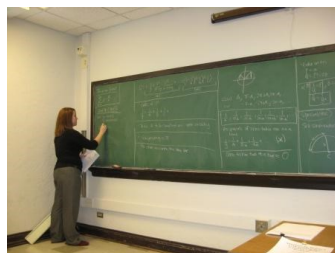
25 April 2008: Statistics graduate student **Danna Zhang** presents the data of her research (in collaboration with others) over two areas titled **"Variations in Carotid Artery Intima-media Thickness during the Cardiac Cycle"**Spencer Menees, Joseph Le, David McCrary MD, **Danna Zhang MS**, Jie Chen PhD, Geetha Raghuveer MD, MPH, and **"Vascular Age of Children of Hypercholesterolemia"**Joseph Le, Spencer Menees, David McCrary MD, **Danna Zhang MS**, Jie Chen PhD, Geetha Raghuveer MD, MPH, at the tenth annual UMKC School of Medicine **Student Research Day 2008**. Congratulations, Danna! Her department **faculty mentor** is Jie Chen.

25 April 2008: In the **Expository Talks Series**, undergraduate mathematics major **Tracey Davidson** gives a **first** 20 minute talk, "**Abraham De Moivre's 1718 Proof of a Gambler's Ruin Problem**", and undergraduate mathematics major **Vivian Bozikis**

gives a **second** 20 minute talk, **"Leonhard Euler's 1734 and 1743 Proofs that [The $1/k^2$ Series] = pi^2/6.**

For Tracey and Vivian the talk was during Math 464 WI (History of Mathematics, Writing Intensive). [See pictures.]

25 June 2008: We hear the good news that Mathematics major **Jace Ferguson** has won the **Advanced Level Essay prize** in the UMKC Ilus W. Davis Writing Competition, and his expository paper "**Early Binary: History and Application**" will be published in the UMKC Fall 2008 Sosland Journal. The paper was written during Spring 2008 for Math 464 WI (History of Mathematics, Writing Intensive).

14 July 2008 - 18 July 2008: Over this week the first **Southwest ECC (Southwest Early College Campus) Summer Scholars Academy** was held on campus for approximately 90 upcoming 9th graders starting at Southwest ECC this Fall. On Monday, Wednesday, and Friday, we offered a total of 9 sample mathematics lectures for the students, given by Adjunct Lecturers Ari Bavel and Breanne Volkerding, GTA Samantha Reynolds, and 2005 MS graduate (and new 9th grade mathematics teacher at Southwest ECC) Joe Morse, and organized by a faculty member. **Southwest ECC** is an open enrollment, mathematics and science focused school for students in grades 6-12 in the Kansas City Missouri School District to open in Fall 2008, formed as a partnership between the District, UMKC, Kansas City's Partnership for Regional Educational Preparation (PREP-KC), the Kansas City Area Life Sciences Institute (KCALSI), and the Woodrow Wilson National Fellowship Foundation (WWF).

26 July 2008: On **Saturday July 26** from **10:00 am - 3:00 pm**, we held our second summer **GTA Teaching Workshop**, organized by the chair of the GTA Supervisory Committee, Liana Sega, and another faculty member. In addition to distributing general and specific information about department policies and the courses they will teach, and just getting to know them, we had each participating GTA give a 15 minute lecture, which was then criticized by both faculty members, as well as the other GTAs present. We also shared pizza, and generally discussed various teaching issues.
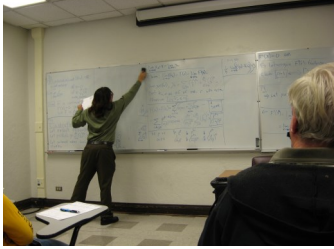
28 July 2008 - 30 July 2008: Over these three days, the first IUE **(Institute for Urban Education) Summer College Immersion** was held on campus for approximately 13 upcoming **IUE** students starting as Freshmen this Fall. We offered 3 mathematics lectures for the students, concentrating on mathematics note-taking skills, homework writing, making test outlines, and general mathematics course survival tips. These lessons were jointly given by GTA Samantha Reynolds, Adjunct Lecturer Breanne Volkerding, and a faculty member.

21 November 2008: We hosted a visit from about 13 students and 5 faculty members of the **Emporia State University** Department of Mathematics, Computer Science, & Economics, who drove up to see our two student talks in our **Expository Talks Series**, eat dinner at the Blue Grotto, and lastly see a com-

edy show in the area. We were also visited by several students and 2 faculty members from the Department of Mathematics and Physics at Rockhurst University. [See **picture**.]

21 November 2008: In the **Expository Talks Series**, under-

graduate mathematics student **Dan Krulewich** gives a **first** 30 minute talk, "**A Continuous Function with Zero Derivative "Almost Everywhere" on [0, 1] that is NeverthelessStrictly Increasing There!.**", [See **picture**.] and undergraduate mathematics student **James Slaughter** gives a **second** 25 minute talk, "**Using Combinatorial Games (like Dominoes) to Prove1/2 + 1/2 = 1.** [See **picture**.] For Dan the talk was given during Math 402 (Advanced Analysis I), and for James the talk was an assignment for **Math 490** (Numbers and Games) an independent study course taught by Eric Hall.

31 December 2008: We hear excellent news about three of our Master's degree Mathematics graduates this semester: **Sam Butler-Hunziker**, MS graduate (Dec. 2008) with mathematics emphasis, has been hired full-time by **Avila University** for Spring 2009. **Carol Hanson**, MS graduate (Dec. 2008) with mathematics emphasis, has been hired part-time by **MCC Maple Woods Community College, Park University, and UMKC** for Spring 2009. **Samantha Reynolds**, MS graduate (Dec. 2008) with mathematics emphasis, has been employed full-time by **Park Hill High School** as a secondary school mathematics teacher since August 2008. Congratulations to them all!

12 March 2009: Our department participated in a visit to the UMKC campus by about 60 top 9th grade **"Math Achiever"** students from **Hickman Mills High School**. Two faculty members spoke to them on **Careers in Mathematics** for 30 minutes each.
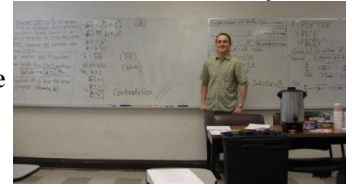
9 April 2009: Statistics graduate student **Danna Zhang** presents the data of her research (in collaboration with others) in a paper titled **"Risk Factors and Carotid Artery Intima Media Thickness change over time in Children with Dyslipidemia"**Neal Mangalat, **Danna Zhang**, Spencer Menees, Jie Chen UMKC, Geetha Raghuveer MD, MPH, Children's Mercy Hospital at the eleventh annual UMKC School of Medicine **Student Research Day 2009**. Congratulations, Danna! Her department **faculty mentor** is Jie Chen.

17 April 2009: In the **Expository Talks Series**, undergraduate mathematics student **Richard Harris** gives a **first** 25 minute talk, "**Cayley's 1889 Formula Counting Trees:**"There are n^{n-2} different labeled trees on n vertices", [See **picture**.] and undergraduate mathematics student **Cam Buie** gives a **second** 30 minute talk, "**The 1906 Erdos-Renyi-Sos Proof of the Friendship Theorem:**"Suppose in group of people we have the situation that any pair of persons has precisely one common friend. Then there is always a person (the 'politician') who is everybody's friend." [See **picture**.] For Richard the talk was during the course Math 464 WI (History of Mathematics - Writing Intensive), and for Cam the talk was during **Math 412** (Advanced Analysis II).

May 2009: College Algebra and Calculus I videos by a faculty member are now available at UMKC's YouTube EDU channel.

8 May 2009: Undergraduate mathematics major **Cam Buie** graduates with the distinction of Departmental Honors. Congratulations, Cam! He will be returning in the Fall as a Graduate Teaching Assistant in our department.

12 June 2009: We hear the good news that the Honors Undergraduate Journal Lucerna has accepted for publication in the Fall 2009 Volume 4, an expository mathematics paper written by Mathematics major **Cam Buie** titled "**The Bernoulli Brothers and the Brachistochrone**". Congratulations Cam! The paper was written during Spring 2009 for Math 464 WI (History of Mathematics, Writing Intensive).

28 June - 1 July 2009: Over these days the second UMKC **Southwest ECC (Southwest Early College Campus) Summer Scholars Academy** was held on campus for approximately 80 upcoming 9th graders starting at Southwest ECC this Fall. On Tuesday June 30, the students each visited one Summer mathematics class and took notes. On Wednesday, Adjunct Lecturer Carol Hanson, and two department faculty members met them in 3 groups to discuss those notes and our department Rough Guide to Surviving Mathematics Classes. **Southwest ECC** is an open enrollment, mathematics and science focused school for students in grades 6-12 in the Kansas City Missouri School District which began in Fall 2008, formed as a partnership between the District, UMKC, Kansas City's Partnership for Regional Educational Preparation (PREP-KC), the Kansas City Area Life Sciences Institute (KCALSI), the Woodrow Wilson National Fellowship Foundation (WWF), and Donnelly College (Donnelly).

20 July 2009: We hear the good news that Mathematics Education major **Bradley Fulk** has won the **Advanced Category Essay prize** in the UMKC Ilus W. Davis Writing Competition, and his expository paper "**Adolphe Quetelet: An Analysis of His Research on the Propensity for Crime at Dif-**

ferent Ages" will be published in the UMKC Fall 2009 Sosland Journal. The paper was written during Spring 2009 for Math 464 WI (History of Mathematics, Writing Intensive).

27 & 29 July 2009: Over these days, we participated in the second IUE **(Institute for Urban Education) Summer College Immersion** held on campus for 19 upcoming **IUE** students starting as Freshmen this Fall. A faculty member presented a mathematics lecture on July 27, and then spoke again to the students on July 29 about the importance of Elementary and Middle School teachers learning mathematics well, and discussed our department Rough Guide to Surviving Mathematics Classes.

5 November 2009: Mathematics Education major **Bradley Fulk** receives his **Advanced Category Essay prize** in the UMKC Ilus W. Davis Writing Competition at the **Sosland Celebration of Writing** in the University Center, for his expository paper **"Adolphe Quetelet: An Analysis of His Research on the Propensity for Crime at Different Ages"** which was published in the UMKC Fall 2009 Sosland Journal. The paper was written during Spring 2009 for Math 464 WI (History of Mathematics, Writing Intensive).

4 December 2009: We hosted a visit from about several students and faculty members of the **Emporia State University** Department of Mathematics, Computer Science, & Economics, who drove up to see a talk in our Expository Talks Series, and eat dinner at Genghis Khan's. From our department, a faculty member joined the group for dinner.
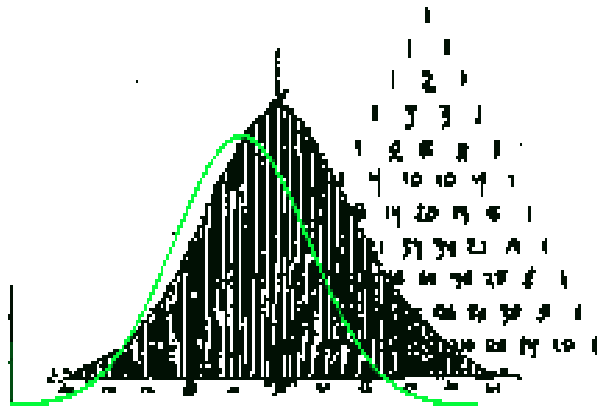
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Send Us Your News!

We're always happy to hear from you. Send a paragraph or two and let us know what you have been up to. Pictures are welcome.
Please include your name, mailing address, and email address so we can contact you.

Send to: Richard Delaware at delawarer@umkc.edu

or

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