



# UMKC RooMath News

*Department of Mathematics & Statistics Newsletter*

<http://cas.umkc.edu/Mathematics>

## News about our department

Volume 1, Issue 1

2004 & 2005

**12 January 2004:** The Department launches its new website designed by two faculty members.

**4 February 2004:** The **Math Committee** submits its Final Report to the Provost. This committee was appointed by the Provost, held eight meetings from September 24, 2003, to February 4, 2004, and was charged in particular with making recommendations regarding "a strategic plan for" and "the mission and structure of the Department".

**February 2004:** Yong Zeng receives an award of \$10,155 from the University of Missouri Research Board. See the UM System newsletter Spectrum, February 2004, Vol. 31, No. 1, p. 3.

**2 April 2004:** The Chancellor's Fund for Innovation announces 18 awards, including a proposal of the Center for Academic Development in partnership with the Department of Mathematics and Statistics to produce a series of 50 minute **Calculus I video tapes** similar to the VSI College Algebra video tapes created in 1998.

**5 April 2004:** The College of Arts and Sciences Provost and Dean appoints, as **new Interim Chair** of the Department of Mathematics and Statistics, **Bruce Bubacz**, former Chair of the Department of Philosophy, Professor of Philosophy and Law, University Distinguished Professor, and former Interim Dean of Arts and Sciences. This follows a recommendation of the **Math Committee** which submitted its Final Report to the Provost on February 4.

**16 April 2004:** The Arts and Sciences Curriculum Committee approves many changes and improvements to our undergraduate mathematics courses, and in particular approves a new course, **Math 105 (The Language of Mathematics)**, to be first offered in Winter 2005.

**19 April 2004:** Members of the "new" Department of Mathematics and Statistics (consisting of the remaining 7 of us full-time faculty) meet with faculty from **Mathematics Education** to discuss our course offerings (**Math 130, Math 140**) for teachers and how we might modify old courses or create new ones, re-arrange our scheduling, and so on, in order to better meet their needs. The meeting is welcomed and generates many ideas.

**23 April 2004:** Two Mathematics faculty members, Jie Chen and **Rebecca Roberts** are honored at the 1st Annual Activity & Program Council's **UMKC Faculty and Staff Appreciation Day** luncheon, having been nominated by the students they teach, advise, or mentor, for having made a

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positive impact in their lives. Congratulations, Jie and Becky!

**29 April 2004:** The department met with faculty from **Economics, Nursing, and Psychology** to discuss our undergraduate statistics offerings (**Math 235, Math 436, Math 441**) and how we might modify old courses or create new ones, re-arrange our scheduling, and so on, in order to better meet their needs.

**7 May 2004:** The department met with many of our mathematics High School Adjunct Faculty at the annual High School/College Program mathematics dinner. The meeting is welcomed and generates much enthusiasm for a closer relationship between us.

**21 May 2004:** The department met with the staff of the Center for Academic Development to discuss a closer relationship with the Math Resource Center, how we might work together more efficiently and expand our tutorial support for undergraduate students of mathematics.

**10 June 2004:** The department met with the Dean and faculty from the **School of Computing and Engineering** to discuss our undergraduate course offerings and how we might modify old courses or create new ones, re-arrange our scheduling, and so on, in order to better meet their needs.

**18 June 2004:** The department met with faculty from **Business**, **Computer Science**, and **Civil Engineering** to discuss our undergraduate statistics offerings (**Math 235**, **Math 436**, **Math 441**) and how we might modify old courses or create new ones, re-arrange our scheduling, and so on, in order to better meet their needs.

**22 June 2004:** We hear the good news that full-time faculty member **Rebecca Roberts** is the recipient of the **2004 Dean's Outstanding Teaching Award for Non-Regular Faculty**. She will be honored at the College of Arts & Sciences Convocation on August 26. For her 20+ years of dedicated and exemplary teaching we say congratulations, Becky!

**June 2004:** Full-time faculty member and senior statistician Jie Chen has been granted a **Development Leave** for the 2004-2005 academic year. During the Fall 2004 semester she will be spending her time at the Stowers Institute in Kansas City. The purpose of such a leave is "to free faculty members from their normal University duties to pursue scholarly interests full-time and maintain their professional standing so that they may return to the University with renewed vigor, perspectives, and insights."

**30 June 2004:** Full-time faculty member **Rebecca Roberts** takes on the role of **GTA (Graduate Teaching Assistant) Supervisor**. She will supervise, train, and mentor our 5 current GTAs.

**8 July 2004:** The Department met with faculty, advisors, an associate Dean, and an assistant Dean from the **Bloch School of Business and Public Administration** to discuss **Math 160** ("Business Calculus") and our other undergraduate course offerings, and how we might modify old courses or create new ones, re-arrange our scheduling, and so on, in order to better meet their needs.

**28 July 2004:** We hold our first ever gathering for all **Part-time Lecturers** teaching in the department during Fall 2004. Of the 16 Part-time Lecturers hired for Fall, 14 are able to attend, and all members of the "new" Department of Mathematics and Statistics (consisting of the remaining 7 of us full-time faculty) as well as our Interim Chair Bruce Bubacz, administrative assistant Tanya Henderson, and 5 Graduate Teaching Assistants are also present. In addition to distributing to our Part-time Lecturers general and specific information about department policies and the courses they will teach, and just getting to know them, we invite guests from the Math Resource Center, Supplemental Instruction, and Arts & Sciences Academic Advising to address them. As a department we initiated this meeting to encourage from our entire "extended" faculty consistency and a high quality of teaching in all our courses.

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**September 2004:** We receive approval to **hire two new full-time faculty members** to start employment in Fall 2005, one of whom will begin with a 3-year term as Chair. We plan to form a search committee, gather applications this Fall and eventually invite some candidates to speak here during Winter 2005, by the end of which a decision will be made. These two new hires would bring us up to 9 full-time members of the department.

**30 October 2004:** Full-time faculty member and statistician Yong Zeng is quoted in a Kansas City Star article by James A. Fussell on page A-1, about whether the winning record of the Washington professional football team in its last home game before the election accurately predicts the presidential winner, especially since it has done so since 1936. The article goes on to say: "The odds of one team correctly predicting the winner 17 times in a row? Not good, said Yong Zeng, a statistics professor at the University of Missouri - Kansas City. Try less than eight in a million. "Of course, this has no bearing on the current election," Yong cautioned. "We're just having fun".

**5 November 2004:** The Arts and Sciences Curriculum Committee approves many changes and improvements to our undergraduate mathematics courses, and in particular approves 5 new courses for the mathematical education of teachers to be gradually offered starting in 2006: **Math 204** (Mathematics for Teachers: Mathematical Immersion), **Math 214** (Mathematics for Teachers: Algebra), **Math 224** (Mathematics for Teachers: Geometry), **Math 414** (Mathematics for Secondary Teachers: Algebra and Analysis), and **Math 424** (Mathematics for Secondary Teachers: Geometry).

**15 November 2004:** The new **Mathematics Advisory Board** formed by invitation from the Department of Mathematics and Statistics meets for the first time. The Board's purpose is to be a conduit to other Schools and Departments of UMKC, and to be available to provide valuable advice when requested. We are very pleased they agreed to participate. The present Board consists of: Rita Barger, School of Education Deb Chatterjee, School of Computing and Engineering Stephen DeLurgio, Bloch School of Business and Public Administration Richard Murphy, Department of Physics, School of Arts and Sciences Charles Wurrey, Associate Dean, School of Arts and Sciences Marilyn Yoder, School of Biological Sciences

**3 December 2004:** The Arts and Sciences Curriculum Committee approves many changes and improvements to our undergraduate mathematics courses, and in particular approves 2 more new courses for the mathematical education of teachers to be gradually offered starting in 2006: **Math 234** (Mathematics for Teachers: Probability and Statistics), and **Math 244** (Mathematics for Teachers: Calculus).

**7 December 2004:** We hear that full-time faculty member and statistician Jie Chen has been awarded an NSF grant for the Winter 2005 semester and beyond: "The National Science Foundation hereby awards a grant of \$90,548 to the PI (Principal Investigator): Jie Chen with this project entitled "**Statistical Approaches to the Analysis of Genome-wide Measurements: Significance of Periodic Gene Expression and Correlations of Gene Content in Completely Sequenced Genomes.**" This award is effective December 15, 2004 and expires November 30, 2005. During the Fall 2004 semester Jie has been spending her time at the Stowers Institute in Kansas City on a **Development Leave**.

**11 January 2005:** We distribute the first edition of our **Advisor Information Document** to Advisors in the School of **Arts and Sciences**, the School of **Biological Sciences**, the School of **Education**, the School of **Computing and Engineering**, the School of **Pharmacy**, and the **Bloch School of Business and Public Administration**. This is part of our continuing effort to provide the UMKC community information about our courses beyond brief catalog descriptions.

**13 January 2005:** We distribute to all students of Math 160 ("Business Calculus"), a letter written by the **Bloch School of Business and Public Administration** to encourage students that this course is essential to their future education, especially in business.

**11 March 2005:** We hear the good news that Liana Segal has accepted our offer to join the Department of Mathematics and Statistics as a **new Assistant Professor, starting Fall 2005**. She will bring her enthusiasm and impressive **expertise in Algebra**, making us now a group of eight. Welcome, Liana!

**30 March 2005:** We hear the good news that Kamel Rekab has accepted our offer to join the Department of Mathematics and Statistics as a **Professor, starting Fall 2005**. His field is **Statistics**, with many interdisciplinary connections, and he will initially serve a 3-year term as Department **Chair**. Kamel is enthusiastic about joining us and will be a welcome addition to our faculty, as well as a strong advocate for our growing Department. Welcome, Kamel! Now, we are nine.

**31 March 2005:** With the signing of our two new full-time faculty members, Liana Segal and Kamel Rekab, **our Graduate Program is now OPEN for Fall 2005!** Applications for graduate school as well as for GTAs (Graduate Teaching Assistant) positions will now be accepted for Fall 2005.

**28 April 2005:** We hear the good news that statistician Yong Zeng has earned tenure and promotion to the rank of **Associate Professor beginning September 2005**. Congratulations, Yong!

**July 2005:** We launch the first set of Mathematics Entrance Tests in the history of our department. These tests are offered **online** through the Blackboard program for any student admitted to UMKC. We are still working out details with academic advisors on campus, but generally intend these tests, starting with the Summer 2006 semester, to be a **requirement** for enrollment in any of the courses: **Math 110** (College Algebra), Math 160 (Brief Calculus & Matrix Algebra), and **Math 210** (Calculus I). For complete information see Mathematics Entrance Tests. These tests continue to be designed, written, and implemented by the department **Mathematics Entrance Test Committee**. We thank **Mary Crosson** of the UMKC Blackboard Support Team for her exceptional assistance as we continue to learn to work with Blackboard. We also thank as well everyone who reviewed and offered valuable comments about the tests and their associated webpages.

**27 July 2005:** We hold our second annual gathering for all Part-time Lecturers and Graduate Teaching Assistants teaching in the department during Fall 2005. Of the 17 Part-time Lecturers hired for Fall, 13 are able to attend, along with some full-time faculty of the Department of Mathematics and Statistics, 5 of our 6 Graduate Teaching Assistants, our Interim Chair Bruce Bubacz, and Administrative Assistant Tanya Henderson. In addition to distributing to our Part-time Lecturers and GTAs general and specific information about department policies and the courses they will teach, and just getting to know them, we invite guests from the Math Resource Center, Supplemental Instruction, and Arts & Sciences Academic Advising to address them. As a department we continue this annual meeting to encourage from our entire "extended" faculty consistency and a high quality of teaching in all our courses.

**August 2005:** We are now accepting I.Ph.D. applications as both a **Coordinating Discipline**, and as a **Co-Discipline**. For more information, contact our Graduate Advisor/Coordinator Dr. Chen.

**September 2005:** To celebrate the open status of our Graduate Program, we announce a new Graduate Seminar Series, featuring (this semester) faculty from within our department. Everyone is welcome.

**October 2005:** Our new **Chair** Dr. Rekab has recently been invited to be a **Coordinating Editor** for the Journal of Probability and Statistical Science (A Comprehensive Journal of Probability and Statistics for Theorists, Methodologists, Practitioners, Teachers, and Others). Dr. Chen is already an **Associate Editor** for this journal.

**29 November 2005:** Our Department Graduate Faculty decide that *effective immediately*

**No comprehensive Master's Examination will be required to earn a Master's Degree with concentration in Mathematics or Statistics.**

**12 December 2005:** Our Department is pleased to host a visit from

- Interim Chancellor **Stephen Lehmkuhle**, and
- Interim Dean of Arts and Sciences **Charles Wurrey**.

We showcase our department with an online PowerPoint **Presentation**.

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

**6 April 2005:** We are pleased to announce that we have chosen undergraduate mathematics major **Melanie Meyer** to receive a **Waldemar J. Trjitzinsky Scholarship for 2005-2006**. Each year the AMS (American Mathematical Society) randomly selects a mathematics department which is an institutional member of the AMS, and asks them to select a student for the award. Our department is among those selected for 2005-2006. The scholarships are funded by a 1988 bequest in memory of Waldemar J. Trjitzinsky, and are intended to help needy, talented students pursue their undergraduate studies in mathematics. Congratulations, Melanie!

**22 April 2005:** In the **Expository Talks Series**, undergraduate mathematics major **Melanie Meyer** gives a 20 minute talk, "**A 1779 Theorem of 72 year old Leonhard Euler: The Solution of a Curious Question: Given any series of  $n$  letters ... , to find how many ways they can be rearranged so that none returns to the position it initially occupied**", and undergraduate mathematics major **Joel Hess** gives a second 20 minute talk, "**An 1881 Theorem of 21 year old Vito Volterra: No continuous function on the real numbers takes rationals to irrationals and irrationals to rationals**".

**May 2005:** Undergraduate mathematics major **Elizabeth Leone** graduates with the distinction of Departmental Honors. Congratulations!

**9 May 2005:** We hear the good news that undergraduate mathematics major **Newlyn Walkup** has won **1<sup>st</sup> place (!)** in the second 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. [Last year on 24 April 2004 we heard that undergraduate mathematics major Heath Yates tied for 1<sup>st</sup> place in the first such annual contest.] Newlyn's paper is titled "**Eratosthenes and the Mystery of the Stades**." He will receive a certificate from the MAA, a free MAA student membership for next year, and \$25 worth of books from the MAA online bookstore. His paper will also be published on the HOMSIGMAA website. Congratulations, Newlyn! The paper was written during Winter 2005 for Math 464 WI (History of Mathematics, Writing Intensive).

**Fall 2005:** In the UMKC Sosland Journal, Mathematics major **Samantha Reynolds** publishes an expository paper, "**Maria Gaetana Agnesi: Female Mathematician and Brilliant Expositor of the 18th Century**", winning the Advanced Level Essay prize, and mathematics major **Newlyn Walkup** also publishes an expository paper, "**The Perspective of Girard Desargues**". The two papers were written during Winter 2005 for Math 464 WI (History of Mathematics, Writing Intensive).

**5 October 2005: ATTENTION! Mathematics Majors & possible Majors!** The first Fall 2005 gathering of our MAA (Mathematical Association of America) Student Chapter will be on:

- Friday October 14 3:00-4:00 pm Haag Hall Room 109 with Pizza and Soft Drinks! Followed by
- 4:00-4:50 pm Haag Hall Room 309 Expository Mathematics Talk **Mayumi Sakata** of William Jewell College Title: "**Subsonic to Supersonic: What's in Between?**"

**6 October 2005:** We present undergraduate mathematics major **Melanie Meyer** with the **Waldemar J. Trjitzinsky**

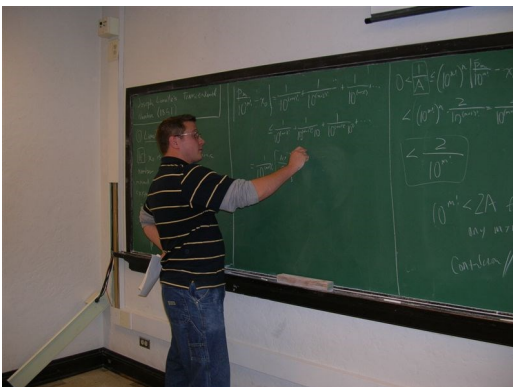
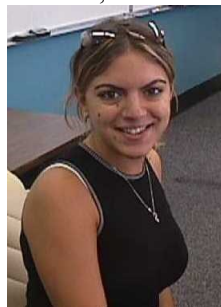
**Scholarship for 2005-2006.** Each year the AMS (American Mathematical Society) randomly selects a mathematics department which is an institutional member of the AMS, and asks them to select a student for the award. Our department is among those selected for 2005-2006. The scholarships are funded by a 1988 bequest in memory of Waldemar J. Trjitzinsky, and are intended to help needy, talented students pursue their undergraduate studies in mathematics. The scholarship is \$3,000 and our department contributed an additional \$1,000. Congratulations, Melanie! [See **picture**. Photographer: Graduate Student **Sarah Vaughn**.]



**November 2005:** We hear the good news that the expository mathematics paper "**Eratosthenes and the Mystery of the Stades**" written by undergraduate mathematics major **Newlyn Walkup**, will now also be published in the MAA's online History of Mathematics magazine *Convergence: Where Mathematics, History and Teaching Interact*. This paper won **1<sup>st</sup> place** in the 2005 second 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 and was already published on the HOMSIGMAA website. Congratulations again, Newlyn! The paper was written during Winter 2005 for Math 464 WI (History of Mathematics, Writing Intensive).

**28 October 2005:** We hosted a visit from 3 faculty members and 8 students of the **Emporia State University** Department of Mathematics and Computer Science, who drove up to see **David Bitters** of the U.S. Army Command and General Staff College in Leavenworth, Kansas, speak on "**Explosive Mathematics**" in our **Expository Talks Series**, eat dinner at Ghengis Khan Mongolian Barbeque, and lastly see the mathematical movie "**Proof**" at the Screenland Theatre downtown. From our department, two faculty members joined the group.

**11 November 2005:** In the **Expository Talks Series**, undergraduate mathematics (and chemistry) major **Pinar Tulay** gives a 20 minute talk, "**Leonhard Euler's 1770 'Proof' that: It is impossible to find any two cubes, whose sum or difference is a cube**", [See **picture**] and undergraduate mathematics (and secondary education) major **David Jackson** gives a second 20 minute talk, "**Joseph Liouville's 1851 Exhibition of the First Transcendental Number**". [See **picture**. Photographer: Graduate Student **Sarah Vaughn**.]

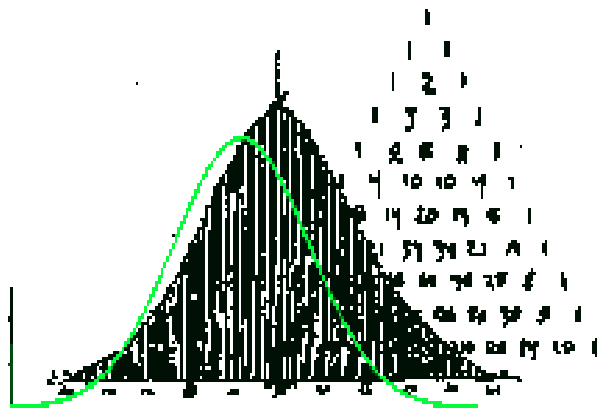


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We encourage you to register as a member of the **UMKC Alumni Association**. Just go to the UMKC alumni website [www.umkcalumni.com](http://www.umkcalumni.com), click on the tab at the top of screen called "MY PROFILE/LOGON", and follow the instructions.

If you would like to donate to UMKC, please visit the **UMKC Foundation** web pages at <http://www.umkc.edu/umkc-foundation/>, where you will find links to Gift Planning, the Alumni Fund, creating a scholarship, and so on. **Our department is one of the few with no department scholarships for our undergraduate majors, and you might be the first to initiate one.**

## 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](mailto:delawarer@umkc.edu)

or

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