

MAA MISSOURI SECTION NEWSLETTER

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2012 MAA Missouri Section Meeting

The Department of Mathematics & Computer Science at the **University of Missouri-St.Louis** will be hosting the Spring Meeting on Friday April 13 and Saturday April 14, 2012 (with the Missouri Collegiate Mathematics Competition beginning the evening of Thursday April 12). MAA Vice-President **Francis Su** from Harvey Mudd College, and **David Wright** from Washington University in St. Louis will be speaking at the meeting.

More information on the meeting will become available on the Missouri-MAA website

<http://sections.maa.org/missouri/index.html>

as well as on the meeting webpage at

<http://umslice.org/index.php/maa-spring-meeting>

Suggestions for the meeting are welcome and may be sent to Section Chair Prabhakar Rao (raoa@umsl.edu).

Call for papers

You are invited to present a paper at the Spring Meeting. Papers are to be between 15 and 20 minutes in length and may be on research topics or expository in nature and may deal with any topic in mathematics or mathematics education. For example, papers may pertain to your current mathematical scholarly activity, new courses that you have developed, or successful techniques you have found useful in teaching. You may opt to design a presentation directed to the undergraduate and graduate students attending the meeting. Faculty members are urged to assist students in presenting papers at the meeting.

The Abstract For Contributed Papers form is on the last page of this newsletter and will also be on the meeting webpage <http://umslice.org/index.php/maa-spring-meeting> in an electronic version that can be filled out. It is preferable that you submit the filled out form electronically to raoa@umsl.edu (please use "MAA abstract" in the subject line). The form can also be submitted by mail to the following address.

MAA Spring 2012 Meeting
c/o Prabhakar Rao
Department of Mathematics & Computer Science
University of Missouri-St. Louis
St. Louis, MO 63121

Please include all of the information requested on the abstract form: presenter's name, title, affiliation, contact information, title of paper, abstract, and special accommodations needed (overhead projector, computer, etc.) Also please indicate if the speaker is a student and if the paper is accessible to a student audience. **Deadline for receipt of abstracts is March 10, 2012.**

Section teaching award

STATE YOUR INTENTION TO NOMINATE BY DECEMBER 1, 2011.

Nominations for the 2011 Missouri Section Award for Distinguished College or University Teaching of Mathematics are now being accepted. The Missouri Section Selection Committee will determine the recipient of the award from those nominated. The awardee will be honored at the Spring 2011 meeting of the Section and will be widely recognized and acknowledged within the Section. The awardee will also be the official Section nominee for the 2011 Deborah and Franklin Tepper Haimo Awards for Distinguished College or University Teaching of Mathematics awarded by the MAA. There will be at most three national awardees, each of whom will be honored at the national MAA meeting in January 2012 and receive a \$1,000 check and a certificate. A special session at that meeting is devoted to talks by the awardees on aspects of their teaching. Anyone may make a nomination. An outline of the nomination process can be found on the MAA web site

<http://www.maa.org/awards/teachingawards.htm>.

Self-nomination is not permitted. If you are planning to nominate someone from your department, please send the name of your nominee to Suzanne Tourville at setourville@ccis.edu by **December 1, 2011**.

The deadline for the submission of all materials remains February 1, 2012.

Eligibility

Nominees must satisfy the following criteria:

- College or university teachers assigned at least half-time during the academic year to teaching a mathematical science in a public or private college or university (from two-year college teaching through teaching at the Ph.D. level) in the United States or Canada. Those on approved leave (sabbatical or other) during the academic year in which they are nominated qualify if they fulfilled the requirements in the previous year.
- At least five years teaching experience in a mathematical science.
- Membership in the Mathematical Association of America.

Guidelines for nomination

The nominees should

- be widely recognized as extraordinarily successful in their teaching*
- have teaching effectiveness that can be documented
- have had influence in their teaching beyond their own institutions**
- foster curiosity and generate excitement about mathematics in their students.

* "teaching" is to be interpreted in its broadest sense, not necessarily limited to classroom teaching (it may include activities such as preparing students for mathematical competitions at the college level, for example, the Putnam Prize Competition or the Mathematical Contest in Modeling, or attracting students to become majors in a mathematical science or to become Ph.D. candidates).

** "influence beyond their own institution" can take many forms, including demonstrated lasting impact on alumni, influence on the profession through curricular revisions in college mathematics teaching with national impact, influential innovative books on the teaching of college mathematics, etc.

Procedures

- Send an email to Suzanne Tourville setourville@ccis.edu stating your intention to nominate by **December 1, 2011**.
- Nominations must be submitted on the "**Nomination Form**" found on the Missouri Section web page at <http://www.maa-mo.org/teachingaward/teachingaward.html>. Anyone may nominate an eligible candidate, but self-nomination is not permitted.
- Please follow the instructions on the form precisely to assure uniformity in the selection process both at the Section and national levels. If a file on a Section awardee significantly exceeds the prescribed limits it will not be considered for a national award and will be returned to the Section.
- Nominations for the Missouri Section Award should be sent to Suzanne Tourville at the address below so as to be received no later than **February 1, 2012**. Nominations for candidates who are not members of the Missouri Section should be sent to the Secretary of the nominee's Section.

Dr. Suzanne Tourville
 Computer and Mathematical Sciences
 Columbia College
 Columbia, MO 65216

Future meeting sites

The Spring Meeting is held at various locations around the state. The meeting sites for the past several years and the next several years are listed below for your convenience. If your campus would be willing to host a Spring Meeting, please contact Prabhakar Rao, Section Chair, or any other member of the Executive Committee.

2005	Missouri Western State College	2013	Northwest Missouri State University
2006	University of Missouri-Columbia	2014	Saint Louis University
2007	College of the Ozarks	2015	Missouri University of Science and Technology
2008	Missouri State University	2016	Missouri Western State University
2009	Truman State University	2017	Missouri Southern State University
2010	University of Central Missouri	2018	Drury University
2011	Columbia College	2019	Lindenwood University
2012	University of Missouri-St. Louis	2020	University of Central Missouri

2012 Meeting of the Missouri Project NExT Section

Project NExT (New Experiences in Teaching) is a national program for new or recent faculty in the mathematical sciences who are interested in improving the teaching and learning of undergraduate mathematics.

Missouri NExT is a similar program designed for faculty members in the Missouri Section of the MAA. Any full-time faculty member in the Section with less than 6 years in their current position is invited to apply to become a Missouri NExT Fellow. Information about Project NExT is available at the NExT web site.

Project NExT Fellows will meet for a reception on Thursday April 12th, and a morning workshop on Friday April 13th, just prior to the Spring Missouri Section meeting. At the workshop, the Fellows will have a chance to interact with one another while attending sessions dealing with different aspects of our profession. It is anticipated that contact between fellows will continue through the year, both electronically and in person. Fellows will be linked in an electronic network with one another and with a number of distinguished teachers of mathematics.

SUPPORT: Expenses for the Friday morning program including breakfast and lunch, and full registration costs for the Missouri Section Spring meeting will be covered for new Fellows. The remainder of the expenses should be covered by the Fellows' home institutions. However some funds may be available for accommodation costs in cases where the Fellow's home institution is not able to cover these costs (see application form). Financial support for this program is provided by the Missouri Section of the MAA.

TO APPLY: Application forms can be found at

http://web.missouri.edu/~aubreyja/mo_next/application.html

Send completed form by March 30th, 2012 to:

Dr. Zdeňka Guadarrama
Missouri NExT Organizer
Department of Mathematics and Physics
Rockhurst University
Kansas City, MO 64114
E-mail: Guadarrama@rockhurst.edu

Missouri Collegiate Mathematics Competition

The sixteenth Missouri Collegiate Mathematics Competition will be held

7:30pm - 10:00pm, Thursday, April 12, 2012, and

8:30am - 11:00am, Friday, April 13, 2012

on the campus of the University of Missouri - St. Louis.

Any college or university in the state of Missouri can send up to two official teams of 1-3 undergraduates each to compete in the competition. Unofficial teams will be allowed, depending on the amount of available space, but will not be eligible for awards. They will also be charged the normal registration fee. A one-person team will be allowed if this person is his or her college's only representative in the competition. **A completed registration form for each team must be received by Monday April 9, 2012.** Late registration will be accepted only if there is room available. No calculators or computers or reference material can be used during the competition. The contest consists of challenging mathematical problems, comparable to but not quite as difficult as the Putnam Exam. The official website of the Contest is:

<http://www.math-cs.ucmo.edu/~hchen/contest/>

Additional information, registration forms and past contests can be found at that site.

From the Governor

The MAA Board of Governors met August 3, 2011 in Lexington, KY. MAA President Paul Zorn presided.

Paul Zorn first thanked many MAA staff and officers for helping him since his beginning serving as MAA President in February 2011. He then commented on two important searches, one for MAA Treasurer (to replace John Kenelly) and another one for MAA Executive Director (to replace Tina Straley).

At a later part of the meeting, the Board was presented the recommendations from the search committees and approved appointing Michael Pearson as the new Executive Director and Jim Daniel as the new Treasurer. Both will begin their five-year term in February 2012.

Secretary Barbara Faires reported that Bob Devaney, Boston University, was elected as president-elect to serve in this capacity for one year beginning February 1, 2012 and then as president for two years. Lloyd Douglas, University of North Carolina at Greensboro, was elected first vice president and Jenny Quinn, University of Washington at Tacoma, second vice president; they also take office February 1 and serve two years.

For the first time, MAA members elected two members of the Nominating Committee to join Caren Diefenderfer and David Stone; those elected are Georgia Benkart, University of Wisconsin, and Jim Tattersall, Providence College; this current Nominating Committee is chaired by the Past President David Bressoud, and they submitted nominations for two governor-at-large positions and for chairs of the Council on the Profession and the Committee on Sections.

She noted that the Committee on the Undergraduate Program in Mathematics (CUPM), chaired by Martha Siegel, is beginning its work on revising/rewriting the guidelines for programs and departments in the mathematical sciences.

She thanked Dan Velleman for finishing his five-year term as editor of *The American Mathematical Monthly* and the vital role he has played in many wonderful papers that appear in this original MAA publication.

Associate Secretary Gerard Venema reported that the total attendance at the 2010 MathFest was 1548 (vs. 1516 in 2009). There were roughly 90 additional students and about 60 fewer mathematicians attending, for a net increase of 32. The early indications are that total attendance in Lexington this year will be roughly equal to that in Pittsburgh, but that student attendance is down. One special feature of the Lexington program will be the inauguration of the new joint MAA-AMS Invited Address series.

The 2012 MathFest program at Madison, WI has just begun to take shape. At present only the invited speakers are known: (a) The three Hedrick Lectures will be given by Bernd Sturmfels of the University of California at Berkeley; (b) MAA Invited Addresses will be given by Robert Ghrist of the University of Pennsylvania, Rick Kenyon of Brown University, and Amie Wilkinson of Northwestern University; and (c) Other speakers, including the second joint AMS-MAA invited address, will be selected very soon.

The total attendance at the 2011 January Joint Meetings in New Orleans was 5986 (vs. 5795 in 2010). Undergraduate attendance continues to increase, while nonstudent attendance is remarkably steady. The result is a small net increase in overall attendance and another record total attendance figure.

The program for the Boston Joint Meetings, January 4–7, 2012, is nearing completion. The Invited Address Committee for JMM 2012 selected the following MAA speakers: Mary Lou Zeeman, Bowdoin College, Rekha Thomas, University of Washington, Seth Sullivant, North Carolina State University, Jennifer Quinn, University of Washington Tacoma, and Carolyn Gordon, Dartmouth College. Erik Demaine of MIT will give the third Porter Public Lecture. His title is *Geometric Puzzles: Algorithms and Complexity*. Topics of the invited paper sessions will include Open Problems in Mathematics, Algebraic Geometry, The Beauty and Power of Number Theory, Clever Counting or Beautiful Bijection, Riemannian Geometry, Climate Change and Sustainability, Knot Theory, Dynamical Systems and PDEs, and Semidefinite Optimization Nonnegative Polynomials, and philosophy of mathematics. A short course on Discrete and Computational Mathematics is being organized. The MAA is planning a total of 29 contributed paper sessions, 20 panel sessions, and 14 minicourses. They cover a wide variety of topics in mathematics, pedagogy, and curriculum.

Treasurer John Kenelly commented that the Audit Committee Report noted we had another good review. Like most of the recent audits the management letter mentioned a few minor suggestions and nothing of any consequence. These small items are easy to implement and will continue to improve our financial operations.

The Total Net Assets (TNA) is painfully slow returning to growth in the last two years. We took a much smaller dip in 2009 and the indicated 2010 figure put us almost at the \$14M, i.e., back to where we peaked in 2008. Real Estate holdings are not represented very well in TNA (our \$17 million buildings being “on the books” for about \$2 million). The last three years have been challenging. First we were hit with the worldwide financial debacle, and then we started a series of difficult deficits. The MAA is financially sound but temporarily having to deal with repeated deficits. He noted that the Budget Committee is presenting a balanced budget proposal for 2012.

John Kenelly reported on behalf of the Investment Committee that we need to make the management of the MAA investment portfolio easier, moving from actively managed to passively managed funds. Everything except GMO was to be moved from Fidelity to a new VanGuard account. Since the financial meltdown, we have recovered all the dollar losses during that period, though the 2011 Quarter returns were not as attractive as we would like.

Joel Haack reported on behalf of the Audit Committee that the auditors gave us an unqualified opinion that the financial statements of the MAA are free of material misstatement. This is the highest level of opinion. The auditors qualified the MAA as a low risk auditee in regard to our performance in overseeing the federal grant revenue that we have overseen and did not identify any deficiencies in internal controls over issues related to receiving and spending of government awards. The audit staff particularly praised the MAA staff for their openness and helpfulness in getting information to the auditors.

Associate Treasurer Rick Cleary reported on behalf of the Budget Committee. The Board was asked to review final totals for the 2010 budget, consider up-to-date information on the 2011 budget, and discuss the proposed 2012 budget. The actual operating results for 2010 show a deficit of \$452,517;

worse than expected. At this time the forecast operating deficit of \$144,874 on the 2011 budget remains a reasonable estimate. The budget as prepared for 2012 shows an operating deficit of just \$1,415, essentially balanced. The Budget Committee and senior staff agree that we need a break from the large deficits we have been running before undertaking any ambitious long term programs. The Board approved the proposed 2012 budget.

Second Vice President Doug Ensley reported that the Strategic Planning Working Group on the SIGMAA program is reviewing policy issues involving (1) the SIGMAA budget accounting process and (2) the processes by which SIGMAAs are reviewed and possibly discontinued. The report from this SPWG will be finalized in October and presented to the Board of Governors at the 2012 Joint Mathematics Meetings.

Strategic Planning Working Group on Books noticed that developments in publishing are moving so quickly that the staff may sometimes need to make decisions in advance of our recommendations. The really big picture questions are, as examples: Should the MAA be in the book publishing business? How can it serve the members and also provide revenue for the Association? Are there niches that we can serve? How can we best market books, particularly texts, without sales reps? Can we sell more books to non-members?

Executive Director Tina Straley commented on the budget situation and the projected downsizing of operations throughout the Association. Cuts have been made to staff size, travel and meals for the Board of Governors and other governance meetings. She also mentioned the complication concerning collecting sales taxes within the states in which we do business. Local laws have been strengthened making it illegal for us to sell books and merchandise unless we comply with local sales tax requirements. In addition, books may not be sold at Section meetings unless local taxes are collected and submitted.

She also commented on MAA's very large website and IT-supported resources, including the various components of MathDL, WeBWork, the Euler Archive, MAA Reviews, Classroom Capsules, online columns and blogs, access to journals, *MAA FOCUS* online, *Math Horizons* online, MathFest registration, meeting abstracts and programs, committee information, members-only financial information, the MAA store, MAA Classifieds, and many more features. A website redesign is underway.

She also updated on the NSF grant to provide hosting WeBWork, an open source homework system. The business model adopted is for MAA to charge for hosting for institutions who would rather not take on the hosting for themselves. Once the grant expires MAA must have a source of revenue to use to continually improve the product. This is a project with both great potential and great risk.

The current estimation is that the annual giving campaign raised approximately \$70,000 in the previous year and the just concluded campaign raised about \$103,000. Though ExxonMobil Foundation won't continue funding Project NExT, we are able to steadily add donors to this cause. A task force has been appointed to direct the fundraising for the Second Century Fund.

The MAA continues to be active in the public policy arena, such as supporting NSF funding and engaging in the debate on open access to federally funded research.

She further noted that E-memberships are becoming a significant proportion of all memberships and in all categories, especially student memberships because all student memberships, both graduate and undergraduate, are e-memberships.

Steve Dunbar reported that a total of 105,496 students took the 2011 AMC 10 (vs. 101,765 in 2010), while 106,204 took the AMC 12 (vs. 109,356 in 2010). Furthermore, we had AMC 10 and AMC 12 participation in 34 countries outside the US and Canada: 16 in Europe, 5 in Africa, 12 in Asia, and 1 in the Middle East. A total of 3401 students took the AIME on March 17 with an average score of 2.8, and a total of 1141 students took the AIME Alternate on March 30, 2011 with an average score of 4.8. There were 293 participants for the USAMO and 234 participants in the USAJMO this year.

Robert Anastasio, Director reported that we had about 20,720 members in 2010 and the total membership revenue was about \$2.1M.

Michael Pearson reported on programs and services. Currently funded projects: Characteristics of Successful Programs in College Calculus (NSF-DRL), WeBWork: Improving Student Success in Mathematics (NSF-DUE) (http://webwork.maa.org/wiki/Main_Page), MAA Distinguished Lecture Series (NSA) (www.maa.org/dist-lecture), MAA Regional Undergraduate Mathematics Conferences (NSF-DMS) (www.maa.org/rumc), MAA SUMMA Research Experiences for Undergraduates (NSA, NSF, Moody's) (www.maa.org/nreup), MAA Professional Enhancement Program (PREP)(NSF) (www.maa.org/prep), Syndication of "Julia Robinson and Hilbert's Tenth Problem" on American Public Television (Joe Gallian), Travel Grants for Undergraduate Students to Attend National Meetings (NSA, NSF), Tensor Grants for Women in Mathematics (Tensor Foundation) (<http://www.maa.org/wam/tensor.html>), Tensor SUMMA Grants (Tensor Foundation) (<http://www.maa.org/programs/tensor-summa.html>), and Dolciani Mathematics Enrichment Grants (Dolciani-Halloran Foundation).

One lecture has been held at the Carriage House since January 2011. April 4, Bart de Smit presented "Escher and the Droste Effect". Stories on the lectures and interviews (including audio excerpts) are available through the MAA website. In addition, video samples of the lectures are posted on the MAA video channel (www.youtube.com/maavideo).

Ivars Peterson reported that, to boost sales of our print products, we are rebuilding our in-house, web-based bookstore as an Amazon-powered storefront. We have also formed partnerships to deliver electronic editions of our journals and other periodicals to subscribers (IgentaConnect to individual members and JSTOR to libraries). We already provide a web browser interface for issues of *MAA FOCUS* and *Math Horizons*, which allows readers to go through the magazines page by page.

New in ebooks early in 2011: **The Beauty of Fractals**, Denny Gulick and Jon Scott, Editors, MAA Notes; **Calculus: An Active Approach with Projects**, Stephen Hilbert, *et al.*, Classroom Resource Materials; **Mathematical Time Capsules**, Richard Jardine and Amy Shell-Gellasch, Editors, MAA Notes; **Keeping it R.E.A.L.: Research Experiences for All Learners**, Carla Martin and Anthony Tongen, Classroom Resource Materials; **Lobachevski Illuminated**, Seth Braver, Spectrum.

Ebook Bestsellers: *Calculus: An Active Approach with Projects*, *The Beauty of Fractals*, *Keeping it R.E.A.L.: Research Experiences for All Learners*, MAA Guides (set of five), *Historical Modules for the Teaching and Learning of Mathematics*, *Hands on History*.

New books in print in 2011: **Hungarian Problem Book IV**, Andy Liu and Robert Barrington Leigh, Problem Books, **Rediscovering Mathematics**, Shai Simonson, Classroom Resource Materials,

Mathematics for Secondary School Teachers, Elizabeth George Bremigan, Ralph Bremigan, and John Lorch, MAA Textbooks, **Expeditions in Mathematics**, Tatiana Shubin, David E. Hayes, and Gerald L. Alexanderson, Spectrum, **A Guide to Advanced Linear Algebra**, Steven Weintraub, Dolciani, **A Guide to Plane Algebraic Curves**, Keith Kendig, Dolciani.

Print Bestsellers: Math through the Ages, Mathematical Interest Theory, Counterexamples in Calculus, Game Theory and Strategy, An Episodic History of Mathematics, Mathematics in Historical Context.

The revised Bylaws of Missouri Section was approved.

Dates and locations for future Joint Meetings and MathFests are

2012	Boston, MA	Joint Meetings	January 4-7
2012	Madison, WI	MathFest	August 2-4
2013	San Diego, CA	Joint Meetings	January 9-12
2013	Hartford, CT	Math Fest	August 1-3
2014	Baltimore, MD	Joint Meetings	January 15-18
2014	Portland, OR	MathFest	August 7-9
2015	San Antonio, TX	Joint Meetings	January 10-13
2015	Washington, DC	MathFest	August 5-8
2016	Seattle, WA	Joint Meetings	January 6-9
2017	Atlanta, GA	Joint Meetings	January 4-7
2018	San Diego, CA	Joint Meetings	January 8-11

Yungchen Cheng

Department news

Culver-Stockton College

Dr. Jonathan McCrary, Assistant Professor of Mathematics resigned on August 1 to take a position with the Department of Defense. We will be seeking a full-time replacement for the fall 2012.

The Culver-Stockton Mathematics Department will again be hosting the AMC10/12B exams on Feb. 25, 2012.

Southeast Missouri State University

Dr. Cheryl McAllister was promoted to Associate Professor and Dr. Pradeep Singh to full Professor. After 29 years of service to the University, Dr. Thomas Wallgren retired in December 2010.

Current mathematics chair Dr. Tamela Randolph, has been appointed Interim Dean of the College of Education at Southeast, and Dr. Craig Roberts has been appointed Interim Chair of the Department of Mathematics.

Southwest Baptist University

The math department continues to host math contests in January for 3rd-8th graders (see <http://users.sbuniv.edu/~khopkins/tourney.htm> for current details). Attendance on two dates is typically 300-350 each date (unless weather complicates attendance). January 2012 will be the 13th year the department has hosted a math contest.

Dr. Kevin Hopkins ran his sixth summer of Math Contest Camp in summer 2011. Additional details are at users.sbuniv.edu/~khopkins/2011mcc.html. He ran both weeks at (or slightly over) his announced cap of 24 per week. For his work with contests and the camp, he has been recognized by the Missouri Council of Teachers as the Outstanding Post-Secondary Mathematics Teacher for 2010 and Parkway Baptist Church as a Parkway Distinguished Professor in May 2011.

SBU Mathematics faculty members, Dr. Bob Glasgow, professor of mathematics, and Dr. Kevin Hopkins, chair of the SBU Mathematics department, presented at the National Council of Teachers of Mathematics National Conference on April 2011 in Indianapolis and will present at the Regional Conference in October, 2011 in St. Louis.

St. Louis Community College at Florissant Valley

The mathematics department welcomed two new full time faculty this year: April Garrison and Doug Runge. Richard Armstrong will retire in December 2011.

University of Central Missouri

Dr. Xiaodong Yue, Associate Professor of Computer Science, has been named the chair of UCM's Department of Mathematics and Computer Science effective August 2011.

Since joining UCM's faculty in 2004, Dr. Yue has been instrumental in several modifications to UCM's B.S. in Computer Science major and the development and implementation of an M.S. in Computer Science program.

In 2006 Dr. Yue was the principal writer of a National Science Foundation S-STEM grant which brought nearly \$500,000 to the department for scholarships. As a result of the four-year program, the department experienced a significant increase in the number and quality of students who were seeking majors in UCM's Mathematics and Computer Science department. In June 2011 he conducted a workshop which provided computer science training for high school mathematics teachers. Google provide the funding.

Dr. Yue has published numerous articles in refereed journals and has made several presentations at national and international conferences. He is a referee for several prestigious journals. His expertise is in wireless telecommunications and networking, mobile computing and pattern recognition.

Dr. Yue received his B.S. and M.S. degrees from Shanghai Jiao Tong University and his Ph.D. from the University of Cincinnati. He served on the faculty at Winston Salem State University for one year prior to coming to UCM.

Dr. Edward Davenport, Dr. Terry Goodman, and Dr. Sue Sundberg retired from UCM's Mathematics and Computer Science Department, effective August 31.

Dr. Davenport, Professor of Mathematics, joined the faculty at UCM in 1972. He received his B.S. from West Texas State University, his M.S. from the University of North Texas, and his Ph.D. from the University of New Mexico. In 1982 Dr. Davenport became chair of UCM's Department of Mathematics and Computer Science. During the past 29 years the department has seen many significant changes. In 1987 the department proposed and received state approval to offer an undergraduate major in Actuarial Science, the only program of its kind at a state supported institution in Missouri. The number of endowed department scholarships has grown from 3 to 22. The Computer Science program has evolved from a small undergraduate major doing only mainframe computing to an ever-changing B.S. program and a new and growing M.S. program in Computer Science. Twenty of the department's current 23 faculty members were hired during his tenure as chair.

Dr. Goodman, Professor of Mathematics Education, has been at UCM since 1977. He received a B.A. and an M.A. in mathematics from Baylor University and a Ph.D. in mathematics education from the University of Texas-Austin. While at UCM, he has won numerous awards recognizing his excellence in teaching. These awards include the Governor's Award for Excellence in Teaching. Dr. Goodman has received several grants designed to improve the mathematics content knowledge, pedagogical skills, and leadership capabilities of practicing mathematics teachers. Most recently, he was the Principal Investigator for the Missouri K-5 Mathematics Specialist Conference, and the Missouri Elementary, Middle grades, and Secondary Mathematics Leadership Academies. Dr. Goodman has authored and co-authored a variety of articles, yearbook chapters, and books on mathematics education. In addition, he is regularly invited to present workshops and sessions at state, regional, and national mathematics education conferences.

Dr. Sundberg, Professor of Mathematics Education, earned a B.S. in Mathematics from the State University of New York at Stony Brook in 1969, a Master's of Education in Mathematics Education from the University of Columbia in 1971, an MBA in Management from Northwest Missouri State University in 1988, and a Ph.D. in mathematics education from the University of Missouri-Kansas City in 1994. She has been a member of the UCM faculty for 22 years. Dr. Sundberg has been involved in many state projects, including the Missouri Mathematics Leadership Academy and the statewide committee which developed the Missouri Mathematics Grade Level Expectations. She has had articles published in national journals and has given many invited talks at the state and national levels. In 2003 she received the Governor's Award for Excellence in Teaching.

Kyle Nobbe, a student at UCM, has received the John Culver Woody Scholarship, awarded annually to college seniors who have successfully completed at least one actuarial examination, rank in the top quartile of their class and are nominated by a professor at their school. Each year, selected students receive \$2,000 scholarships, established by the estate of John Culver Woody, a distinguished actuary who set aside funds to provide scholarships to actuarial students. The Research Committee

of The Actuarial Foundation administers the scholarship as part of its mission to carry out research and education projects in the field of actuarial science on behalf of the actuarial profession.

University of Missouri Kansas City

In Fall 2010, we welcomed two new tenure-track faculty. The first is Ian Besse, Ph.D. Applied Mathematics, University of Iowa, 2010, whose research interests are in Mathematical Biology, Differential Equations, Dynamical Systems, and Optimization. In particular, he has done research in the "Mathematical Modeling of Caveolar-Associated Ionic Currents in Cardiac Action Potential", as well as the "Optimization of Drug Dosages related to a Theoretical Combined Radiopharmaceutical Cancer Therapy." The second is Tom Fisher, Ph.D. Mathematical Sciences, Clemson University, 2009, whose research interests are in Multivariate Analysis and its applications in Genetics, Computer Science, and Economics. Stochastic Processes, Kernel Smoothing, and Time Series Analysis. He does research in the properties and inference of covariance matrices in high dimensions (e.g., DNA microarray data), and is currently investigating hypothesis testing for an identity covariance matrix and testing for stationarity in time-series analysis. You can read about all our faculty on our department web site: <http://cas.umkc.edu/mathematics/>.

In Spring 2011, Richard Delaware was awarded the 2011 UMKC Provost's Award for Excellence in Teaching.

We learned in May 2011 that UMKC undergraduate mathematics major Paul Stahl was the winner of the eighth 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. Paul's winning paper is titled "Kepler's Development of Mathematical Astronomy," and it was posted on both the HOMSIGMAA, and the Convergence web sites. In addition this year, UMKC undergraduate mathematics major Rick Hill was one of two runners-up. Rick's paper is titled "Thomas Harriot's Artis Analyticae Praxis and the Roots of Modern Algebra." Our department has done well in this contest: In 2010 we had three UMKC finalists and one first place winner, in 2008 we had one finalist, in 2006 we had three finalists and one first place winner, and in both 2005 and 2004, we won (or co-won) first place. Paul will receive an MAA student membership and some MAA books provided by HOMSIGMAA, a complimentary CSHPM (Canadian Society for the History and Philosophy of Mathematics) membership, and books donated by Johns Hopkins University Press. Both Paul's and Rick's papers were written in Spring 2011 for UMKC Math 464 WI (History of Mathematics, Writing Intensive) taught by Richard Delaware.

In August 2011 we learned that our department algebraist Liana Segal has been awarded two separate research grants. The first grant is from the Simons Foundation "Simons Collaboration Grants for Mathematicians" program for 5 years at \$7,000 annually, to be used for travel and inviting collaborators. [However, she will only be able to keep it for one year, since it is incompatible with federal funding - see her next grant.] The second grant is for 2011-2014 from the National Science Foundation (NSF) in the amount of \$85,843 for her proposal "Homological Behavior of Modules over Commutative Local Rings".

Eric Hall is spending most of the Fall 2011 semester at the University of the Aegean in Greece, on Pythagoras' island of Samos, working with colleagues Kyriakos Keremidis and Eleftherios Tachtsis on research into ultrafilters and other areas of set theory. Eric will also visit Saharon Shelah in Jerusalem, working on models of ZFA set theory without the axiom of choice.

This Fall 2011, Liana Segal was promoted to Associate Professor with tenure, and Noah Rhee was promoted to Professor.

This Fall 2011 we were also able to hire three non-tenure track full-time lecturers. This is the first time UMKC has allowed us to hire such faculty in 27 years. Their primary duties will be to teach our Calculus I, II, and III courses, although they will teach other courses, and do service as needed. One is M. Naeem Ahmad, Ph.D. Mathematics, Kansas State University, 2011, whose interests are in Geometry and Topology: cobordism theory, elliptic genera, stable homotopy theory, low-dimensional topology, field theories, algebra, and analysis. Another is Swati DebRoy, expecting to complete her Ph.D. in Mathematics, from the University of Florida, Gainesville, in Dec. 2011. She has an M.S. in Mathematics from the same university, 2007. Her interests are in the interface of Mathematics and Biology, infectious diseases, immunology, epidemiology, and population dynamics. The third is Stephanie Van Rhein, M.S. Applied Mathematics, Missouri University of Science & Technology, 2011, who also has a brief high school teaching background.

One continuing department activity is to host, since 2009, the annual Kansas City Regional Mathematics Technology EXPO [<http://kcmathtechexpo.org/>]. Richard Delaware has participated for all 21 years of the EXPO, and is now site coordinator and financial secretary. The EXPO is a two-day conference for mathematics teachers at the 4-year college, 2-year college, and high school level held in October with an annual attendance of about 140. Its purpose is to be: "A forum for mathematics instructors at both the college and secondary levels to demonstrate how they use technology successfully in their teaching, to learn about new mathematics technology, and to discuss the philosophy and future of technology in the mathematics classroom."

Another ongoing department presence, now on the internet and hence having international impact, are complete College Algebra & Calculus I video courses posted on YouTube [<http://www.youtube.com/user/umkc#p/p>]. The courses were posted in May 2009, though Richard Delaware recorded them in 1998, and 2005, respectively. We publicize them to our UMKC students every semester. The first video of College Algebra has had about 98,000 hits, and the first video of Calculus I about 88,000 hits, and both video courses are also included on the Virtual Professor web site: <http://www.virtualprofessors.com/>. In addition, Richard continues to personally receive dozens of personal emails about the videos from viewers in 20+ countries, an unexpected and pleasant turn of events.

Washington University

This year the department welcomed a new post-doctoral Chauvenet Lecturer, Ivan Horozov. Dr. Horozov received a Ph.D. from Brown University, and his research interests lie in number theory and algebraic geometry, more specifically themes related to arithmetic groups.

Professor John McCarthy has been honored with a named chair. He is now Spencer T. Olin Professor of Mathematics.

Professor Alice Silverberg (University of California, Irvine) has accepted an invitation to give this year's Loeb Undergraduate Lecture in Mathematics. Professor Silverberg's interests lie in areas related to algebraic geometry and cryptography. The talk is tentatively scheduled for 4:30 on Wednesday, April 4, 2012. More information will be available in the early spring. Everybody is welcome.

The Washington University Mathematics Department will host the first annual North America "Gone Fishing" event for people interested in Poisson Geometry at the end of October. See

<http://www.math.wustl.edu/~xtang/gone-fishing.htm>

The department currently have two tenure track positions open. See

<http://wumath.wustl.edu/news/1045>

About the Newsletter

The MAA Missouri Section Newsletter is published in November, March, and May each year.

Please send any news, comments, questions or corrections to me at aubreyja@missouri.edu.

Jason Aubrey
Newsletter Editor

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This form is available electronically at <http://umslce.org/index.php/maa-spring-meeting>. Forms should preferably be submitted by e-mail to raoa@umsl.edu (please use "MAA abstract" in the subject line) or sent by regular mail to

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THE DEADLINE FOR SUBMISSION IS **MARCH 10, 2012**.