From the Chair (Amila Appuhamy)

2017 MAA Missouri Section Meeting

The Department of Mathematics at Missouri Southern State University is pleased to host the Spring Section Meeting on Friday, March 31 and Saturday, April 01, 2017. Also the Missouri Collegiate Mathematics Competition will be held on Thursday evening and Friday morning, March 30 & 31.

Betty Mayfield from Hood College is our banquet speaker on Friday.

Registration and more information about the meeting will be available on the meeting webpage soon. Registration fees are discounted by $5 for registration received before March 10, 2017.

Call for papers

You are invited to present at the Spring Meeting. Presentations should be 15 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 online abstract submission form will be available on the meeting website. Submissions online are   preferred; however, there is a form for contributing a presentation at the meeting on the last page of this newsletter for those unable to submit their abstracts online. You may attach a scanned copy of the completed form and email to *appuhamy-@mssu.edu or* send to the address on the form. Please put "MAA Abstract" in the subject line if you email it.

We will have space for student posters to be presented at the meeting on Friday. Students are invited to submit poster abstracts using the Abstract Submission form on the meeting webpage.

Deadline for submissions is **March 10, 2017**.

From the Governor (Mary Shepherd)

It is a great chance for me to give you an update on what is going on at the national level of the MAA. MathFest 2016 was held in Columbus, Ohio, August 4 – 6, 2016. The Board of Governor's met, as usual, the day before MathFest opened. Now, if you are like me you might wonder, why Columbus? Well, the Ohio Section of the MAA claims to be the first section and that was the reason for choosing Columbus for the first meeting after the Centennial Celebration last year. Of course, the Missouri and Kansas Sections might dispute that claim, but that was the reason for the choice of Columbus, Ohio for the MathFest this past summer. As usual, it was a great meeting and I enjoyed the talks and meeting atmosphere as I usually do.

Some of the items discussed at the Board of Governor's meeting that should be of interest to many of you include (1) some concerns and suggestions related to the eroding membership in the MAA; (2) The proposed new governance structure with associated By-Laws and Articles of Incorporation changes; (3) upcoming meetings; (4) discontinuance at the national level of the MAA/Department Liaisons program; and (5) The approval of a new SIGMAA. There were many other discussions, but these are the ones I would like to highlight in this report.

Eroding membership: Membership in the MAA has been eroding for about 15 years. About 40% of members are over 60 years old. Only about 1 in 4 tenure-track faculty members in mathematics departments are MAA members. For junior faculty only about 1 in 6 tenure-track faculty members in math departments are members of the MAA. Some reasons suggested by surveys for this erosion are (a) that for many the perceived benefits are not worth the cost of membership, and (b) some prefer the AMS to the MAA. There are about 23,000 tenure-track faculty in math departments in the US and an additional 10,000 more math adjuncts.

It seems clear the MAA needs to develop new benefits that are relevant to attract younger faculty members and reach people on the platforms they are using. MAA President Francis Su had these suggestions. (1) Better communication about the MAA and what we stand for. To this end he established a Task Force on Social Media to understand the problem and begin to address it. (2) New benefits to serve a new generation. President Su himself has just created a new app (iPhone/iPad, soon to be Android) for Math News. (3) Tiered membership which was essentially done away with several years ago. There is also some push to have a focused and clear set of Mission, Vision and Valuing Statements. These are still under discussion.

New Governance Structure: New proposed Bylaws and updated Articles of Incorporation are also proposed. It appears the Articles of Incorporation have not been updated since about 1920, so it is definitely time for that. The proposed Bylaws will change the governance structure of the MAA. Essentially the current Board of Governors will become the Congress, and the current Executive Council will become the Board. The executive summary of the proposed changes is below.
Executive Summary of Revisions

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Executive Summary of Substantial Changes to the MAA bylaws

1. Article I, Section 2 was added to clarify the legal context for the Association and these bylaws.
2. Article II, Section 3 was added to identify broad classes of membership so that, in particular, the voting membership can be defined. Section 4 was added for clarification.
3. Article IV, Section 1 was expanded to include a larger set of Officers. Other sections were added to this article to describe their roles.
4. Article V, Section 2 was modified to create a small Board of Directors consisting of the set of Officers. Section 7 was created to provide the Voting Membership a direct mechanism to voice concerns to the Board.
5. Article VI creates a new representative Congress which advises the Board on several matters and elects three members of the Board. This includes the authority to set strategic goals for the Association and to foster communication among the various constituencies within the Association.
6. Article VII was modified to be in alignment with the Act. The Board makes appointments to committees, not the president. There are two types of committees: Board committees, whose membership must have a majority consisting of Board members and which can act on behalf of the Board, and Advisory committees whose membership can be open but which can only advise the Board.
7. Article VIII, Section 7 was modified to make the Nomination Committee advisory as required by the Act. Section 9 was modified to include a quorum.
8. Article XIII was modified to clarify which body has the authority to make amendments to the Articles or Bylaws.

Department Liaisons program: The MAA/Department Liaisons program is being discontinued, but sections are encouraged to start or continue a Section Liaison program. The Committee on MAA/Departmental Liaisons found that the Liaison program at the national level was no longer an effective method of communicating information from the MAA.

New SIGMAA: One of the community building programs of the MAA has been the SIGMAA program. SIGMAA stands for Special Interest Group of the MAA. The most recently approved SIGMAA is the SIGMAA for IBL (Inquiry Based Learning). This brings to 13 the number of SIGMAAs, each with its unique perspective of community building. I am personally a member of the SIGMAA on RUME (Research in Undergraduate Mathematics Education), SIGMAA-ARTS, and SIGMAA-IBL. The full list of SIGMAAs is on the MAA webpage (after a little digging).

- The Joint Mathematical Meetings will be in Atlanta, Georgia, January 4-7, 2017
- MathFest 2017 will be in Chicago, Illinois, July 26-29, 2017

This brings to a close my report on MathFest. I have enjoyed this first year and a half as your section governor and I look forward to the next year and a half. If you ever have any questions

related to anything at the national level, please let me know. If I don't know the answer, I can find out someone who can help you.

> Respectfully submitted,
> Mary Shepherd

From the Secretary (Phoebe McLaughlin)

Each year, every Section of the MAA is invited to select a college or university teacher to be honored with a Section Award for Distinguished College or University Teaching of Mathematics. Last year the Missouri Section again failed to have anyone nominated for the Section Teaching Award. This is a very unfortunate state of affairs for the Missouri Section.

Nominations for the Section Distinguished Teaching Award 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 2017 meeting of the Section and will be widely recognized and acknowledged within the Section.

Anyone may make a nomination, but nominations from chairs or MAA liaisons in departments of mathematical sciences are especially solicited. We urge you to submit a nomination for the MAA Missouri Section Award if you have someone eligible and qualified in your department. Even if not selected this year, it is an honor for someone to have been nominated, and your candidate can likely be nominated again in a future year. Your department will receive recognition for its commitment to excellence in teaching, and the work done in preparing a nomination folder for your candidate is a tribute in itself. Self-nomination is not permitted.

Please discuss this with your colleagues.

Eligibility

- ❍ College or university teachers who currently teach a mathematical science at least halftime during the academic year 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.

- ❍ More than seven years of experience in teaching a mathematical science.
- ❍ Membership in the Mathematical Association of America.

Guidelines for Nomination

Nominees should

- ❍ Be widely recognized as extraordinarily successful in their teaching.*

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❍ Have teaching effectiveness that can be documented.

❍ Have had influence in their teaching beyond their own institution.**

❍ 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 such as the Putnam Prize Competition or the Mathematical Contest in Modeling, attracting students to become majors in a mathematical science or to become Ph.D. candidates, working with pre-service or in-service teachers, etc.

** "influence beyond..." can take many forms, including demonstrated lasting impact on alumni, influence on the profession through curricular revisions in college mathematics teaching with wide-ranging impact, influential publications or innovative books concerned with the teaching of college mathematics, etc.

Nominations must be submitted on the "Nomination Form."

http://www.maa.org/sites/default/files/pdf/awards/Haimo_NF.pdf

Please submit a preliminary nomination form (page 1 of the Nomination form) by January 15. This may be done electronically and sent to the Secretary at lathrom-g@mssu.edu.

Follow the instructions on that 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 (as stated on page 2 of the Nomination Form), it will not be considered for a national award and will be returned to the Section.

Please send six copies of each nomination packet to

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Phoebe McLaughlin, Secretary
Missouri Section

University of Central Missouri
W.C. Morris Building, Room 222

Warrensburg, MO 64093

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so as to be received **no later than March 6, 2017.**

Nominations for someone from another Section should be sent to the Secretary of the nominee's Section.

We look forward to your participation in this exciting MAA venture of taking substantive action to honor extraordinarily successful teaching. We want to see such teaching recognized at all post-secondary school levels. We depend on you to help us identify those who merit such recognition.

At the national level, MAA recognizes outstanding teaching with the Deborah and Franklin Tepper Haimo Award for Distinguished College or University Teaching of Mathematics; each

year at most three awards are given. At least one of the Award recipients must be a current Section nominee. This Section nominee may be the current recipient of the Section Award for Distinguished Teaching or a previous recipient of such an award from any Section. At most one of the Haimo Award recipients may be other than a current or past recipient of a Section Award for Distinguished Teaching. As you see, your nomination for a Section Award for Distinguished Teaching provides the opportunity for the person to be nominated for the national award.

Missouri Collegiate Mathematics Competition (Curtis Cooper)

The twenty-second Missouri Collegiate Mathematics Competition will be held 7:30pm - 10:00pm, Thursday, March 30, 2017, and 8:30am - 11:00am, Friday, March 31, 2017 on the campus of the Missouri Southern State University.

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 March 27, 2017. 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.

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 Amila Appuhamy, Chair (Appuhamy-A@mssu.edu), or any other member of the Executive Committee.

> 2017   Missouri Southern State University
> 2018   Drury University
> 2019   Lindenwood University
> 2020   University of Central Missouri
> 2021   Truman State University
> 2022   University of Missouri – Kansas City

2023   Missouri State University

From the Campuses:

Culver-Stockton College (submitted by Gary Cochell)
Abdallah Talafha, Assistant Professor, is now the chair of the mathematics department. Also, we are offering the AMC 10/12B exams in February 2017.

Missouri University of Science and Technology (submitted by Robert Roe)
Dr. V.A. Samaranayake, Missouri S&T Curators' Distinguished Teaching Professor of Mathematics and Statistics, was named a Fellow of the American Statistical Association (ASA), the nation's preeminent professional statistical society at the annual Joint Statistical Meeting (JSM) held during August in Chicago, Ill. With funding support from the Missouri Department of Higher Education (MDHE) for the 12th consecutive summer, Professor Samaranayake directed the Missouri S&T Science Education & Quantitative Literacy Program (SEQL) workshop for 3rd, 4th, and 5th grade teachers of mathematics and science (http://seql.mst.edu).

Dr. Gayla Olbricht, Missouri S&T Assistant Professor of Mathematics and Statistics, in addition to being a Co-PI with Professor Samaranayake for the S&T SEQL workshop has received NSF funded support from the Center for Undergraduate Research in Mathematics (CURM) (http://curm.byu.edu) to involve undergraduate students in mathematics and statistics research through S&T's OURE program (http://ugs.mst.edu/experientiallearning/oure/).

Professors Olbricht and Samaranayake together with Professor Matt Thimgan, Missouri S&T Assistant Professor of Biology, as part of their ongoing collaboration through the S&T Center for Statistical and Computational Modelling of Biological Complexity (CSCMBC) have received National Institutes of Health (NIH) funding for their project, "Mathematically modeling sleep in a model system", which seeks to mathematically model the sleep system in fruit flies.

Dr. Martin Bohner, Missouri S&T Curators' Distinguished Professor of Mathematics and Statistics, with co-authors published two books, "Jensen Inequalities on Times Scales" and "Difference Equations, Dynamical Systems and Applications", and 21 articles in refereed journals and conference proceedings. Dr. Bohner was elected Vice President and member of the board of directors for the International Society of Difference Equations (ISDE).

Paul Runnion, Missouri S&T Assistant Teaching Professor of Mathematics and Statistics, continues leading the departments effort to redesign the teaching our calculus sequence as part of the Missouri S&T Strategic Plan. Those interested in learning details of the redesign effort are encouraged to contact professor Runnion (prunnion@mst.edu).

The MO S&T Mathematics department hired two new assistant professors for fall 2016. They are:

1.) Dr. Nan Jiang studies turbulence modeling, computational fluid dynamics, numerical analysis, and efficient ensemble simulation methods. She holds a Ph.D. in mathematics from University of Pittsburgh. Previously she served as a Postdoctoral Associate Researcher in the Department of Scientific Computing at Florida State University.

2.) Dr. Wenqing Hu studies probability, random dynamics and probabilistic methods in partial differential equations. He holds a Ph.D. in mathematics from the University of Maryland, College Park and comes to Missouri S&T from the University of Minnesota, Twin Cities, where he served as a postdoctoral associate.

Dr. Roman Dwilewicz passed away on July 29, 2016 after a short illness. Roman joined the S&T Mathematics Department as an Associate Professor 2001. He received tenure in 2004 and was promoted to Professor in 2006. He had previously held positions at the University of Warsaw, University of Montreal, University of Regina, University of Western Ontario, and Texas A&M. He published over 60 research papers and books, received 3 teaching awards while at S&T and in 2012 received the Missouri University of Science and Technology Research Award. Prof. Dwilewicz will be greatly missed by all who knew him.

Saint Louis University (submitted by Brody Johnson)
Prior to the fall semester, the former Department of Mathematics and Computer Science was split into two new departments: the Department of Computer Science and the Department of Mathematics and Statistics. The computer science faculty consists of Drs. Ahn, Chambers*, Esposito, Ferry, Fritts, Goldwasser, Letscher*, Scannell*, and Sukhodolsky. The mathematics and statistics faculty are Drs. Bart, Blyth, Cantwell***, Clair**, Currey, Druschel, Ford***, Freeman, Gill, Gong, Harris, Hebda, Huling, Hutz, Jackson***, Jeevanjee, Johnson, Kalliongis, Khan, Marks, May, Rainbolt, Randrianarivony, Speegle, Srivastava, Stevens***, Tsau, Vega, and Wacker.

There are two open positions in the Department of Mathematics and Statistics for Fall 2017. The first is a tenure-track position in the area of statistics, while the second is a teaching postdoc. For more information about these positions, please visit http://mathjobs.org.

For more information about the department and its faculty, please visit the department's website.http://mathstat.slu.edu/

*Denotes a computer science faculty member with a secondary appointment in mathematics and statistics.
**Denotes a mathematics and statistics faculty member with a secondary appointment in computer science.

***Denotes an emeritus faculty member.

Southwest Baptist University (submitted by Kevin Hopkins)

The Mathematics Department of Southwest Baptist University welcomes Alexandra Archer as Instructor of Mathematics. She received her Masters Degree from the University of Missouri-Columbia in May 2016. She is replacing John Bryant who retired from teaching mathematics after 50 years at SBU. John Bryant continues coaching tennis at SBU.

In October 2015, Dr. Kevin Hopkins, professor of mathematics and department chair, had an essay published in "My Name is Frank and That's Who I Am", a Festschrift of essays in honor of Frank H. Thompson. Dr. Hopkins' essay was included in the tribute essay section of the book. Dr. Hopkins was one of the few "non-philosopher/pastor" contributers to this tribute to Dr. Thompson, long-time Philosophy professor at Greenville College, Greenville, IL. Dr. Hopkins took one summer class from Dr. Thompson while earning his Bachelor's Degree from Greenville College in 1983.

Washington University in St. Louis (submitted by Ronald Freiwald)
John McCarthy is the new Department Chair, succeeding David Wright who served as Chair for 12 years.

New people in the Department include

Dr. Yasha Berchenko-Kogan (Ph.D. 2016, M.I.T.) will be a new Chauvenet Post-doctoral Lecturer.

Dr. Michael Hartz (Ph.D. 2016, University of Waterloo, Canada) will be a new Chauvenet Postdoctoral Lecturer.

Prof Kelly Bickel is visiting from Bucknell. She works in operator theory, several complex variables and harmonic analysis.

Dr. Zhenghui Huo (Ph.D. 2016, University of Illinois) will be visiting this year.

Dr. Chris Cox (Ph.D. 2016, Washington University) will be visiting this year.

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 ddaly@semo.edu.

Dan Daly
Newsletter Editor

MISSOURI SECTION OF
THE MATHEMATICAL ASSOCIATION OF AMERICA

ABSTRACT FOR CONTRIBUTED PAPERS

Author(s) : _____

Presenting author: _____

Presenter is: faculty _____ a graduate student _____ an undergraduate student_____

Institution:

Address:

Phone: (_____)   Email:

Paper Title:

Abstract:

Is the presentation directed towards a student audience?

All presentation rooms are equipped with computers and projectors or presenters can connect their own laptop computers to use projectors. Rooms will also have chalk boards.

You may attach a scanned copy of the completed form and email to lmccune@missouriwestern.edu (please use "MAA Abstract" in the subject line) or send by regular mail to

> Lori McCune
> Department of Computer Science, Mathematics & Physics
> Missouri Western State University
> Agenstein Hall 135K
> 4525 Downs Dr.
> St Joseph, MO 64507

The deadline for submissions is **March 18, 2016**.