Fall meeting at Montgomery College Germantown

On November 4-5, 2005, Montgomery College at Germantown will host the Fall 2005 MD-VA-DC Regional Meeting of the MAA. Germantown is located on I-270 about ten miles northwest of I-495.

On Friday afternoon from 4-5:30, Brigitte Servatius of Worcester Polytechnic Institute (and Editor of the Pi Mu Epsilon Journal) will be sharing a workshop titled, "Bracing of square grids". Frank Farris of Santa Clara University (and Editor of Mathematics Magazine), will be the banquet speaker on Friday evening. The title of his talk is "Equitability and the Gini Index".

On Saturday, Brigitte Servatius (Friday's workshop leader) and Catherine Bénéteau of Seton Hall University will be providing our invited talks. Brigette shares, "Combinatorics catalogs Geometry - Geometry generates Combinatorics" and Catherine shares, "The Isoperimetric Problem".

Participants should pre-register for the meeting. You MUST pre-register if you wish to attend either the dinner on Friday evening or the lunch on Saturday. While on-site registration is available, pre-registration simplifies the process. Your badge, receipt, and any meal or workshop tickets will be waiting for you at the registration desk when you arrive.

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Dates to remember

- Deadline for contributed talks (Fall meeting): October 19
- Banquet registration (Fall meeting): October 24
- Hotel reservations: October 15
- Fall meeting: November 4-5
- Abstract Submission (for Joint meetings): 9/28/05
- Joint meetings of the MAA, AMS: January 12-15, 2006

Lodging

Fairfield Inn & Suites
20025 Century Blvd, Germantown, MD 20874
Phone: 301.916.0750
MAA Rate: $84.00 plus 12% tax
1.4 miles to Montgomery College-Germantown

Hampton Inn
20260 Goldenrod Lane, Germantown, MD 20876
Phone: 301.428.1300
MAA Rate: $89.00 plus 12% tax
Adjacent to campus, but about 0.9 driving miles
parking lot to parking lot.

Both properties have blocked rooms until October 15, 2005. Please make reservations early. Identify yourself as an "MAA" conference participant.
Abstract: The rich are indeed getting richer, as measured by the Gini index, a number that economists use to express the degree to which a distribution of resources is equitable. If everyone had a perfectly equal share of the pie, the Gini index would be 0. One person having it all would lead to a Gini of 1. In the United States, the Gini index for family income has been rising steadily since the 1960s, from a low of about 0.34 to a current value of about 0.41. The Gini index for wealth has also been increasing and is now about 0.80. In this talk, I’ll develop the Gini index and discuss the problem of computing it from data. The main mathematical tool is a simple one, the definite integral that gives the area between two curves, but more advanced topics, such as moments and order statistics, also appear.

Bio: Frank Farris serves as editor of Mathematics Magazine through 2005. He hopes to continue its tradition of inspiring and challenging teachers and students of mathematics at the undergraduate level. A native Californian, Frank did his undergraduate work at Pomona College and received his Ph.D. from M.I.T. in 1981. Awards include a Trevor Evans Award for his article “The Edge of the Universe” in Math Horizons and the David E. Logothetti Teaching Award at Santa Clara University, where he has taught since 1984.

Abstract: The study of complex geometric objects often begins by identifying the basic ingredients, such as points, lines, and planes, and determining the incidences among these objects. The resulting incidence structure is a combinatorial object which only partially captures the original. For example it may have more symmetries than the original geometric object. Under special circumstances it is possible to recover key properties of a geometric object from the combinatorial information alone. As an illustration of a general procedure, we use the characterization of self-dual graphs to classify self-dual polyhedra.

Bio: Brigitte Servatius is Professor of Mathematics at Worcester Polytechnic Institute. She received MS degrees in Mathematics and Physics from the University Of Graz, Austria and a PhD in Mathematics from Syracuse University in 1987. Since then she has been teaching at WPI. Her main research interests are matroids, especially rigidity matroids, as well as graph and combinatorial group theory. She enjoys coaching the Putnam Team, directing graduate and undergraduate research and using models puzzles and games in the classroom. She is editor of the Student Research Projects for the College Math Journal and editor of the Pi Mu Epsilon Journal.

Abstract: The isoperimetric problem, posed by the Greeks, proposes to find among all simple closed curves the one that surrounds the largest area. The isoperimetric theorem then states that the curve is a circle. It is first mentioned in the writings of Pappus in the third century A.D. and is attributed there to Zenodorus. However, a rigorous proof was only achieved towards the end of the 19th century! I will discuss the history of the problem and some of its geometric and analytic proofs. Finally, I will talk about some applications to the study of shapes of electrified droplets and small air bubbles in fluid flow.

Bio: Catherine Bénéteau has an undergraduate degree and a master's degree in mathematics from McGill University in Canada, and a Ph.D. in mathematics from the University at Albany. She is a member of Project NExT, a professional development program for young mathematicians. She taught at the program for talented youth run by Johns Hopkins University and is currently an Associate Professor at Seton Hall University in South Orange, New Jersey. She has published papers in the areas of complex analysis, ergodic theory, and mathematics education. She has received grants for her own research, and for her work in curriculum development and undergraduate research. She recently had a daughter and finally found something that she loves at least as much as mathematics!
CHAIR’S REPORT

Hurricane Katrina has affected every community in the US. Many colleges and universities in the MD-DC-VA Section have helped out by taking in students tuition free. If you know of a mathematician who has been displaced by Katrina let the MAA know so that they may provide support. Our thoughts are with the victims as they try to get their lives and institutions up and running again.

Bud Brown and Jon Scott have planned a wonderful Fall Meeting for us. On Friday, there will be a workshop led by Brigitte Servatius and a banquet followed by a talk by Frank Farris. On Saturday we will enjoy talks by Brigitte Servatius and Catherine Bénéteau as well as contributed papers, Section NExT activities, book displays, and lunch. A big thanks to Bud and Jeff Holt for the very successful Spring meeting at the University of Virginia.

The Section has established a National Project NExT Sponsors program. The Section will make a collective donation to support the national NExT program. Our goal is to support one national NExT fellow each year. Donations are welcome at any level but we have named three amounts, Euclid ($10), Euler ($25), and Erdös ($50). Note: These donation levels do not suppose to rank the relative achievement of these mathematicians, but are ordered according to their historical eras. Corporate sponsorships are $300.

There are a number of ways you can support our MAA Section. Participate in Section meetings. Encourage your colleagues and undergraduate and graduate students to attend meetings and give talks. If we each brought a (distinct) buddy to a meeting we would double our attendance. Donate to the National Project NExT Sponsors program. Volunteer your time to help run our Section. Elections are held every spring for Section Officers. Consider nominating yourself or a colleague for a position. A list of the Section Officers and the dates for their terms is posted on the section website at http://www.morgan.edu/MAA/MAA_Officers.htm

Our Section is one of the most active in the country and we have much to be proud of. Please do all you can to help our Section continue to grow and serve the MD-DC-VA mathematical community.

Eve Torrence, Chair

GOVERNOR’S REPORT

We are all looking forward to traveling to Montgomery College for another delightful fall section meeting program prepared by Program Chair Bud Brown.

Those able to make the trip to Albuquerque experienced a particularly successful Mathfest in August, with a superb collection of invited speakers and excellent contributed papers and other sessions. A highlight for me was attending the awards ceremony, where our very own Program Chair Elect (and my JMU colleague) Laura Taalman was one of the winners of the Henry L. Alder Award for Distinguished Teaching by a Beginning Faculty Member. Congratulations Laura!

Upcoming meetings: Now is the time to make plans for the Joint Mathematics Meetings in January, 2006. San Antonio is such a wonderful place for a conference. You know you will regret it if you are shoveling snow when some of your colleagues are enjoying both a great mathematics program and dinner outside on the river walk!

Please visit www.maa.org sometime soon to see some of the things planned for San Antonio, and while you are there take a look at all of the very interesting reports, stories, and features about the mathematical community and the activities of your association.

No news yet on the status of the January 2007 meeting, scheduled for New Orleans. Let’s hope for a successful recovery and that once again we can see mathematicians on Bourbon Street. Once again, I want to remind everyone of the importance of the support you the members provide by serving on national MAA committees. Volunteers are always welcome. Members who might be interested in being appointed to a committee or who have suggestions or nominations should contact Martha Siegel at MSiegel@towson.edu. See you on November 4!

David Carothers, Governor
Randolph Macon College
We are happy to announce that Dr. Brian Sutton has joined the mathematics faculty. Dr. Sutton received his Ph.D. in June 2005 from the Massachusetts Institute of Technology. His research interests, notably random matrix theory, are in the areas of linear algebra, probability, and computation. He also enjoys flag football, water skiing, and the occasional friendly game of poker.

Hood
Due to the vast increase in Hood's enrollment, which you may have read about in the Washington Post, we now have more students enrolled in mathematics courses than ever before in Hood's history. As you might imagine, this is both exhilarating and exhausting, but we like to think we're spreading the Gospel of Calculus far and wide. Lest we were feeling overstaffed, this spring Betty Mayfield will be taking a well-deserved sabbatical, her first in something like 100 years of service to the college. We all look forward to her talks at future section meetings on the research she'll be doing. And on Labor Day we got a new addition to the department when Kimber Tysdal welcomed her first baby, Thorin Seeley Foster!

James Madison University
We welcome new faculty members Kane Nashimoto from the University of Wisconsin, Platteville, Ling Xu from the University of New Mexico, and Anthony Tongen from the University of Arizona. Congratulations to Laura Taalman who is a winner of the MAA Henry Alder Award for distinguished teaching by a beginning faculty member.

St. Mary's
This year we welcome two new faculty members to the college. Sandy Ganzell specializes in 4D topology and joins us after finishing his Ph.D. at Rice University and spending a few years at Pomona College. Alex Meadows graduated from Stanford with a degree in PDE's and comes to St. Mary's by way of a post-doc at Cornell.
Virginia State University

The Department of Mathematics and Computer Science at Virginia State University conducted a six-week Summer Research program that was funded for $25,000 by NSF/NSA through MAA. Five students participated in this program under the guidance of Dr. Raymond Fletcher and Dr. Dawit Haile. The title of the research project was "Graph Theory and Cevian Algebra". Students were provided a one-week intensive introductory session and then worked under close supervision of the two professors. This was the second summer of the undergraduate research project at VSU. The participants of the summer 2004 program presented their results at 19th National Conference on Undergraduate Research (NCUR) (May, 2005 at VMI, Lexington, Va.) and the 62nd Annual Meeting of National Institute of Science (March, 2005 Richmond, Virginia). Participants of the summer 2005 program will make presentation of their results at the 2005 SUMS conference at James Madison University on Nov. 12, 2005.

Naval Academy: Professor W. Charles Mylander, Ph. D. Stanford University, retired in June 2005 after 33 years of service to the U. S. Naval Academy. Charles is highly regarded in the operations analysis community and remains active in the Military Applications Section of INFORMS and in the Military Operations Research Society.

Recently hired:

Asst Prof Sommer E. Gentry, Ph. D. in Electrical Engineering and Computer Science at M.I.T. An article on optimization work done by Sommer and her husband, Dr. Dorry Segev, a transplant surgeon at Johns Hopkins Hospital, appeared in Time Magazine, Sept. 12, 2005. From the article, “Last year the duo partnered to devise a system that could save hundreds of lives a year by more efficiently matching kidney donors with the 62,000-plus Americans waiting for a transplant.” Sommer and Dorry are also competitive swing dancers.

Asst Prof Russell Jackson, Ph.D. in Applied Mathematics at Brown University. Funded by the NSF, he served as a Mathematical Sciences Postdoctoral Research Instructor at Boston University before joining the faculty at the U. S. Naval Academy. In his research, Russell uses tools from dynamical systems theory in order to explore the qualitative behavior of evolving systems. In particular, he works to identify bifurcations of nonlinear waves, and to understand the stability properties of those same waves, in applications such as neuroscience and optics. Russell is also an avid triathlete.

Naval Academy cont...

Asst Prof Vrej Zarikian, Ph. D. in Mathematics from UCLA. Vrej’s research interests are in Operator Algebras and he joins a research group at the U. S. Naval Academy that specializes in that field. He wrote his doctoral dissertation, Complete One-Sided M-Ideals in Operator Spaces, under the direction of Professor Edward Effros at UCLA. Before joining the faculty at USNA, Vrej had a three-year VIGRE Postdoctoral Fellowship at the University of Texas in Austin, TX, and a one-year Visiting Assistant Professorship at the University of Cincinnati.

Salisbury University

We welcomed Dr. Troy Banks to our faculty this semester. Troy just received his Ph.D. in Applied Mathematics in May 2005 from The University of Texas at Dallas.

ANNOUNCEMENTS

The first Shenandoah Undergraduate Mathematics and Statistics (SUMS) Conference will be held at James Madison University on November 12, 2005. SUMS will feature short contributed talks by undergraduates about their research, accessible invited talks by working mathematicians, a math careers panel, an invited talk intended specifically for high school students, and a poster session.

We hereby invite you attend SUMS, and ask that you please forward this information to your colleagues and students. If you have students who have done research as undergraduates (even if they are currently graduate students), please encourage them to submit a talk. We are also soliciting poster presentations on any mathematical topic. All mathematically inclined students are encouraged to attend, regardless of previous research activity. Students who have done research this summer should find that the conference is a good place to polish talks before the Joint Meetings.

The conference is free and open to the mathematical community, including undergraduates, faculty, graduate students, high school students, and teachers. Lunch will be provided free to participants who register by October 21. Limited travel support is available for participants in all categories. Funding for SUMS at JMU is provided by NSF grant DMS 0241090 through the MAA Regional Undergraduate Mathematics Conferences Program. Additional support is provided by the College of Science and Mathematics at James Madison.
SUMS cont.
University, the Department of Mathematics and Statistics at James Madison University, the Math Club at JMU, the Association for Women in Science, the Research Experience for Undergraduates program at JMU, and James Madison University.
For more information about SUMS or to register, please visit the conference web site, http://www.math.jmu.edu/~brownet/SUMS.

TEACHING AWARD NOMINATIONS

All members of the section are invited to nominate a candidate for the section's teaching award. The deadline for nominations is November 18, 2005. Nomination procedures can be found at: http://faculty.goucher.edu/blewand/smithaward/Call_for_Nominations.htm.

Katrina

MAA seeks to support members of the mathematical community suffering from the impact of Hurricane Katrina. Send information to programs@maa.org including name(s) and contact information of affected individuals who are seeking housing and/ or placement for the Fall 2005 term. This information will be made available to MAA section officers and liaisons as appropriate. We hope to be able to assist individuals and institutions match up needs and resources. A list of affected institutions can be found at: http://www.maa.org/katrina/Katrina-Higher-Ed-status.html.

Editor needed

The Mathematical Association of America seeks to identify candidates to succeed Bruce Palka as editor of the American Mathematical Monthly when his term expires in December 2006. The Search Committee plans to make a recommendation during the summer of 2005 so that the new editor can be approved by the Board of Governors and begin handling all new manuscript submissions in January, 2006. The new editor would be Editor Elect during 2006 and would serve as Editor for the five years 2007-2011. For more information see: http://www.maa.org/news/032205monthlyedito.

This is a new column in our newsletter. If you have something you wish to share that involves mathematics and popular culture, let me know at jabergner@salisbury.edu.

Has anyone taken the time to view the new series on television, NUMBERS? The CBS show starts its new season on Friday, September 23 at 10p.m.

Ira Flatow, the host of Science Friday on National Public Radio, interviewed the producers and mathematical consultants on his April 29 show. A recording of this episode can be found in the archives at http://www.sciencefriday.com/. If you do a search by date, April 29, 2005, it is listed as “Hour 2: Popular Mathematics”.

Texas Instruments is going to lead a math education initiative based on the series. The materials will be at: cbs.com/numb3rs.

For more information on this, see http://www.nctm.org/news/releases/2005_0920nmb3rs.htm.

What do you think about the show? Would you recommend it to a student? Would you recommend it to a colleague?

PROOF

An adaptation of the Pulitzer Prize-winning play by David Auburn, PROOF, has been released nationwide. Gwyneth Paltrow plays the role of Catherine, a young woman struggling with the death of her father, a brilliant mathematician, and her own mathematical talent.
THINGS TO DO

Get involved in your section

Give a talk at the Fall meeting. Submit your abstracts by October 19.
Use the form at: http://www.math.vt.edu/people/brown/call4papersf05.html

Check it out!

The MAA’s online journal of the history of mathematics.
http://convergence.mathdl.org/jsp/index.jsp

Give a talk at a local high school.

Swarnali Sengupta, President of Mu Alpha Theta at Ocean Lakes High School in Virginia Beach recently contacted our Section. He shared, “I want to promote an interest in mathematics among students and to motivate students to dig deeper into this subject. Many of the students have shown an interest in a lecture series on different topics of mathematics and its applications.” Would you or anyone you know be willing to provide a talk, free of charge, for this eager group? Or perhaps you teach at a university that is close to this school and you could invite the group to a talk that is already scheduled. Swarnali can be reached at swarnali_nc@yahoo.com.

Future National MAA meetings

Joint Mathematics Meetings, January

2006 San Antonio
2007 New Orleans
2008 San Diego
2009 Washington
2010 San Francisco
2011 New Orleans

MathFest, August

2006 Knoxville
2007 San Jose
2008 Madison

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