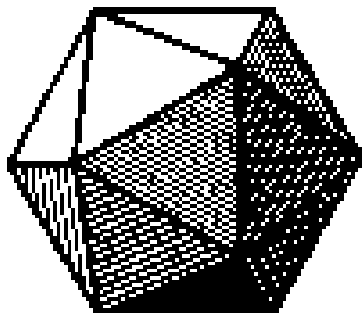


INDIANA SECTION
OF THE
MATHEMATICAL ASSOCIATION OF AMERICA



SPRING 2003
NEWSLETTER



Spring 2003 SECTION MEETING

*Butler University
Indianapolis, IN
March 28-29, 2003*

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Indiana Section Web Page: <http://www.maa.org/indiana>

FUTURE MEETINGS

Section

Fall 2003: Goshen College (Goshen, IN), October 11, 2003

Spring 2004: Indiana State University (Terre Haute, IN), TBA

Fall 2004: University of Evansville (Evansville, IN), TBA

National

Summer 2003: MathFest 2003, Boulder, CO, July 31–August 2, 2003

Winter 2004: Joint National Meetings, Phoenix, AZ, January 7-10, 2004

Other Meetings

20-th Annual Rose Hulman Undergraduate Mathematics Conference: Rose Hulman Institute of Technology, March 21-22, 2003.

2003 Illinois Section Meeting of the MAA: Illinois College, March 28-29, 2003.

2003 Spring Central Section AMS Meeting: Indiana University at Bloomington, April 4-6, 2003.

2003 Ohio Spring Section MAA Meeting: Ohio State University at Columbus, April 4-5, 2003.

2003 Michigan Section MAA Meeting: Saginaw Valley State University, May 2-3, 2003.

STATEMENT FROM RICK GILLMAN (CHAIR OF THE INDIANA SECTION)

Welcome back to the spring semester!

As you can read elsewhere in the newsletter, our spring meeting will be at Butler University in a few weeks. We will be featuring a panel discussion of effective and easy assessment programs for mathematics majors, and Erica Flapan, of Pomona College, will be our keynote speaker. She will be talking about connections between chemistry and topology in one talk, and about her research in knot theory in a second talk.

We also have an wide range of contributed faculty talks on the program, and a classroom software workshop. I think that everyone should all find be able to find something to match their mathematical taste!

As usual, we will have quite a few program items of interest to our undergraduates, including the Friendly Competition and a game theory workshop being led by David Housman. This is an excellent opportunity to bring your students to a meeting. And, as always, we encourage you to invite your students to give talks at the meeting. This is a very friendly environment for undergraduates to have this experience.

Please note that registration for the ICMC will be done on-line through the section's website. We are hoping that this will ease some of the congestion and confusion during the spring meeting registration. If it is successful, and well-received, we will be looking to begin pre-registering on-line for attendance at the meeting itself in the next year or so.

I was very pleased to see all of the campus news that was in the fall newsletter. I encourage you to continue to send items to John for the newsletters. I know that things are always changing on our campuses (at least on mine) and is really nice to be able to know what is going on elsewhere.

I'm pleased to tell you that the MAA has finally published a book recording the history and the problems from the Indiana College Mathematics Competition. This has been a goal of several of us for many years, and I hope that many positive things happen for the section because of its publication.

I'm looking forward to seeing you at Butler University in a few weeks.

SPRING MEETING PROGRAM (TENTATIVE)

Butler University
Indianapolis, Indiana
Friday and Saturday, March 28-29, 2003

Friday, March 28, 2003

3:00-4:00 **Registration** (Gallahue Hall Atrium)

3:15-6:15 **MAA Book Sale** (Gallahue Hall 101)

4:00-4:15 **Contest Instructions** (Gallahue Hall 108)

4:15-6:15 **Panel on Assessment** Bill Marion, Valparaiso University (Gallahue Hall 108)

Abstract: Over the past five years pressure from many sides has been building on higher education to join the accountability movement. This usually translates into something called outcomes assessment or assessment of student learning. For many different reasons faculty have tended to resist the pressure, but to little avail. The movement just keeps on coming. For the past decade the MAA has taken the lead among disciplinary organizations in promoting the idea that, if assessment is not going to go away, it is preferable to have a faculty-driven program rather than one imposed from the outside. The MAA's current project is one of providing support for mathematics departments as they develop their assessment programs. This effort is backed by a \$500,000, three-year NSF-funded grant awarded to the MAA. The project is entitled Supporting Assessment in Undergraduate Mathematics (SAUM). It includes a series of national workshops, forums at Section meetings, a volume of case studies and a website for information about assessment. A link to the website can be found at www.maa.org. Today's forum will be presented in three parts (one-half hour each). First, Bill Marion, a member of the SAUM Steering Committee, will talk about the national effort. Second, two local members of the Indiana Section will describe their own assessment efforts. Third, we will open the discussion to the audience. One of the key issues in this part of the forum will be to talk about what both you and we can do.

4:15-6:15 **The Friendly ICMC Competition** (Various rooms on campus)

6:30-7:30 **Banquet** (Atherton Union, Reilly Room)

7:30-7:45 **Awards** (Atherton Union, Reilly Room)

7:45-8:45 **When Topology Meets Chemistry**, Erica Flapan, Pomona College (Atherton Union, Reilly Room)

Abstract: Stereochemistry is the study of the 3-dimensional structure of molecules, and topology is the study of those properties of geometric objects that are invariant under deformations. It is not obvious that these two fields have anything in common. In fact, not long ago there was little communication between researchers in these two areas. Prior to forty years ago, analyzing the topological properties of existing molecular structures was not very interesting, because as topological objects, the graphs of all of the molecular structures known at the time could be deformed into a plane. Thus understanding the stereochemistry of a molecule only required the evaluation of its geometry and not its topology. Recently, knots and links and other non-planar molecules have been synthesized whose structures and properties come from their topology as well as their geometry.

These molecules are often large enough that they no longer have the rigidity that is characteristic of small molecules; so understanding their deformations is an important part of understanding their structure. In this talk we will discuss how topology can be used to help us analyze the symmetries of such flexible molecules.

Saturday, March 29, 2003

7:30-8:15 **Chairs & Liaison Breakfast** (Wyndam Hotel)

8:00-9:00 **Registration** (Gallahue Hall Atrium)

8:00-3:00 **MAA Book Sale** (Gallahue Hall 101)

9:00-9:05 **Welcome** Dr. Paul Hanson Dean of College of Liberal Arts and Sciences (Gallahue hall 108)

9:05-9:35 **Good Modeling Problems, Practices and the MCM** Don Miller, Saint Marys College (Gallahue Hall 108)

Abstract: *As an MCM judge with 11 years tenure, I have seen several modeling problems of variable quality and many "models" of yet more variable quality. From these experiences, I will discuss criteria for a good modeling problem as well as the components of a quality solution. Good problems beget good models thus facilitating the teaching of good modeling practices. Audience participation will be solicited.*

NOTE: The next three lists describe parallel sessions.

Session 1 (Gallahue Hall 102)

9:45-10:15 **Fredholm Integral Equation Method on a Schroedinger Equation** Sheonyoung Kang, Purdue North Central

Abstract: *A new numerical approximation scheme based on the spectral type of Clenshaw-Curtis Quadrature is investigated for Fredholm Integral Equation of the second kind $x(t) + k(t, s)x(s)ds = y(t)$ whose kernel $k(t, s)$ is either discontinuous or non-smooth along the main diagonal, would be presented. Numerical example implemented by this scheme for Schroedinger Equation would be shown.*

10:20-10:40 **History of Mathematics in the Middle East** Morteza Seddighin, Indiana University East

Abstract: *We will discuss the contribution of Middle East to development of mathematical knowledge both before and after Islam. This includes the mathematical work of various civilizations such as Sumerians, Akkadians, and Babylonians from 3500 BC to 200 BC in Mesopotamia. We will also look at the work of Arabic/Islamic mathematicians in the period between eight century and middle of fifteenth century. In particular we will discuss the work of mathematicians such Al- Khwarizmi and Omar Khayyam.*

10:40-11:00 **BREAK**

11:00-11:20 **Is There Really any Mathematics in Graph Theory?** Chip Vandell, IPFW

Abstract: *For many people the mention of graph theory conjures up pictures of dots and lines scribbled on restaurant napkins. A friend once described it as: "lots of fun, but not much mathematics going on." In this talk we will look at a graph theory problem which is relatively easy to get into, but requires different mathematical techniques to solve its various subproblems.*

11:25-11:45 **The Combinatorics of Symmetric Functions** Thomas Langley, Rose-Hulman Institute of Technology

Abstract: *There is a remarkable connection between representations of the symmetric group and symmetric multivariable polynomials (polynomials that are unchanged when the variables are permuted). This correspondence, in which characters of irreducible representations are mapped to Schur functions, allows the combinatorics of symmetric functions to be used to solve representation theoretic problems. This talk will provide an introduction to this beautiful combinatorial world, introducing symmetric functions, tableaux, Schur functions, plethysm, and the Robinson- Schensted correspondence.*

11:50-12:10 **On Partial Vertex List Colourings** Zsuzsanna Szaniszló, Valparaiso University

Abstract: *In a classical graph colouring problem the vertices of a graph are properly coloured if no adjacent vertices have the same colour. In a list colouring problem each vertex has an associated list of colours that can be used in the colouring. We improve the lower bound on the number of vertices that can be properly coloured from given lists.*

Session 2 (Gallahue Hall 105)

9:45-10:15 **Contest Solutions**

10:20-10:30 **Student Talk**

10:35-10:45 **Student Talk**

10:45-11:00 **BREAK**

11:00-12:00 **Student Workshop, Part 1: A Beautiful Mind: Some Game Theory of John Nash** David Housman, Goshen College

Abstract: *The game of Hex, equilibria in strategic games, and a solution to the bargaining problem are three contributions that John Nash made to the theory of games. Participants will play some games and learn about Nash's associated contributions.*

Session 3 (Gallahue Hall 106):

9:45-10:45 **MyMathLab The Virtual Math Lab** Gwen Terwilliger, University of Toledo Christine Ngautibbits, Addison Wesley Publishing

Abstract: *Please join us for a demonstration of MyMathLab.com, an online teaching and learning tool designed to accompany all major Addison-Wesley mathematics textbooks. Enhanced by interactive Java applets, animations, and video and audio content, MyMathLab offers algorithmically generated tutorials and testing tracked in a nationally hosted course-management system. A faculty advocate will be on hand to answer questions about the incorporation of this program into the classroom.*

10:45-11:00 **BREAK**

11:00-11:20 **Problem Solving with Computers** Young Lee, Manchester College

Abstract: *A new temporary course that I proposed and taught at Manchester College, called Problem Solving with Computers, discusses practical and analytical methods of using computers to solve problems. These methods include Maple, Matlab, spreadsheets, and elementary C++ programming techniques. The use of spreadsheet-based sampling experiment is excellent for introducing the basic concepts of new topics. The graphical visual aids and intuitive commands associated with symbolic computation engage students' interest in the problems that they solve. Programming in C++ or Matlab clarifies the details of the numerical methods that they apply and encourages them to explore active investigation of such methods. This talk will discuss using computers to learn critical-thinking skills, computational techniques, and analytical ability as well as recent changes in our beliefs about teaching and learning with computer integrated models.*

11:25-11:45 **Primality Tests: Past, Present and Future** Robert Talbert, Franklin College

Abstract: *The generation of large (at least 100-digit) prime numbers is at the heart of many modern computing applications such as public-key encryption. The elementary methods used for telling whether small integers are prime, such as checking for divisors less than the square root of the integer, become computationally infeasible for larger integers. If we are given a large integer, how do we tell if it is prime in a fast and efficient way? In this talk, we will address this question with a brief tour of a few important tests for primality. We will also take a look at the AKS algorithm published in August 2002 that solves the centuries-old problem of finding a deterministic, unconditional, polynomial-time algorithm for deciding whether an integer is prime.*

11:50-12:10 **Möbius Transformations and Ellipses** Adam Coffman, IPFW

Abstract: *The image of an ellipse under a Möbius transformation of the plane is not necessarily an ellipse. I will show some pictures that demonstrate what the image could be, and establish under which conditions the image is another ellipse.*

12:10-1:00 **Lunch** (Robertson Hall, Johnson Room)

1:00-1:55 **Student Workshop, Part 2** (Gallahue Hall 105)

1:15-1:55 **Business Meeting** (Gallahue Hall 108)

2:00-3:00 **Topological Symmetry Groups of Graphs Embedded in 3-space** Erica Flapan, Pomona College (Gallahue Hall 108)

Abstract: *The group of symmetries of a molecule plays a role in predicting the molecule's behavior. For a rigid molecule, this symmetry group is well defined and straight forward to evaluate. In order to analyze the symmetries of a flexible molecule, Jon Simon introduced the topological symmetry group of a graph embedded in 3-space. We define the Topological Symmetry Group of an embedded graph Γ as the group of those automorphisms of the vertices of Γ which can be induced by some deformation of Γ in space.*

In 1938, Frucht showed that every finite group is the automorphism group of some graph. In contrast, we show that not every finite group can be the topological symmetry group of some graph embedded in 3-space. This result naturally leads to the question of which groups can be the topological symmetry group of some embedded graph. We answer this question for the class of 3-connected graphs.

For updates on the spring meeting schedule, see <http://www.valpo.edu/mathcs/MAAprogram.htm>.

SPRING 2003 MEETING INFORMATION

Directions to Butler University

1. **(From the North)** Take I-865 East to I-465 East. Take I-465 East to Exit 31 - Meridian Street. Turn right on Meridian Street; travel to 46th Street. Turn right on 46th Street. 46th Street leads directly to campus.
2. **(From the North on I-69)** Take I-465 West to Exit 31 - Meridian Street. Turn left on Meridian Street; travel to 46th Street. Turn right on 46th Street. 46th Street leads directly to campus.
3. **(From the South on I-65)** Take Exit 113 - Meridian Street (North). Turn right on Meridian Street; travel to 46th Street. Turn left on 46th Street. 46th Street leads directly to campus.
4. **(From the Southeast on I-74)** Take I-465 West to I-65 North. Take Exit 113 - Meridian Street (North). Turn right on Meridian Street; travel to 46th Street. Turn left on 46th Street. 46th Street leads directly to campus.
5. **(From the East on I-70)** Take I-65 North to Exit 113 - Meridian Street (North). Turn right on Meridian Street; travel to 46th Street. Turn left on 46th Street. 46th Street leads directly to campus.
6. **(From the West on I-70)** Take I-465 North to Exit 17 - 38th Street. Turn right on 38th Street; travel to Clarendon Road (You will pass a shopping mall and the Indianapolis Museum of Art). Turn left on Clarendon Road (Clarendon Road is immediately past Crown Hill Cemetery). Travel to Hampton Drive; turn right. At the next stop sign, turn left onto Sunset Avenue. Travel to the stop sign at 46th Street. Turn left into the one-way traffic roundabout at the main campus entrance.

7. (**From the West on I-74**) Take I-465 North to Exit 17 - 38th Street. Turn right on 38th Street; travel to Clarendon Road (You will pass a shopping mall and the Indianapolis Museum of Art). Turn left on Clarendon Road (Clarendon Road is immediately past Crown Hill Cemetery). Travel to Hampton Drive; turn right. At the next stop sign, turn left onto Sunset Avenue. Travel to the stop sign at 46th Street. Turn left into the one-way traffic roundabout at the main campus entrance.

Parking on Campus

On Saturday, March 29, 2003 participants can park in any parking space on campus. There is no restricted parking on Saturdays and Sundays. On Friday, March 28, 2003 participants should park in the Clowes Memorial Hall parking lot or on Lake Road. If these are full then you can park in any available parking space. If you get a parking ticket on Friday give it to Amos Carpenter.

Meeting Registration

The MAA meeting will take place in Gallahue Hall. Registration will be held in the Atrium on the first floor of Gallahue Hall and will begin at 2:30 p.m. on Friday and 8:00 a.m. on Saturday. A meeting registration fee of \$10.00 will be collected from each non-student participant. There is no registration fee for students. All participants, including students, are expected to sign-in at the registration table. Please note that Butler University is a smoke free environment.

Meal Reservations

Meals will be served in the Atherton Union, Reilly Room. The Friday dinner will cost \$17.00 per person and the Saturday lunch will cost \$8.50 per person. For the dinner there will be a choice of either Chicken Jardine or Florentine Stuffed Manicotti each to be served with tossed salad, dinner rolls, roasted garlic mashed potatoes, green beans almondine, cheesecake with a topping, ice water, iced tea, regular and decaffeinated coffee. The lunch will be a deli buffet consisting of smoked turkey, ham, tuna salad, swiss cheese, cheddar cheese, cole slaw, fresh fruit salad, and cookies. Advanced reservation is required. Reservation for the meals may be made no later than 12:00 noon, Monday, March 17, 2003 in one of the following ways:

- (1) Call Teri Amberger at (317)940-9521 or Amos Carpenter at (317)940-9436.
- (2) Send an e-mail message to Teri Amberger at tamberge@butler.edu. E-mail reservations will be acknowledged by e-mail.

When making your reservation you should say whether you want the Chicken Jardine or the Florentine Stuffed Manicotti.

Accommodations

Blocked rooms (with discounts) have been negotiated with the following hotels:

1. Wyndham Hotel Indianapolis (Meridian and I-465)
251 East Pennsylvania Parkway
Indianapolis, IN 46280
(317) 574-4600
\$69.00 plus tax until March 7, 2003. Mention Butler University, Mathematics Department.
2. Signature Inn Carmel (Meridian and I-465)
10201 North Meridian Street
Indianapolis, IN 46280
(317) 816-1616
\$71.00 plus tax until March 7, 2003. Mention IMAA Conference, Butler University.

3. Comfort Inn and Suites North (Michigan Road and I-465)
9090 Wesleyan Road
Indianapolis, IN 46268
(317) 875-7676
\$49.00 plus tax until February 28, 2003. Mention Butler University, Mathematics Department.

Additional hotels are listed below. They all offer a Butler University discount.

1. DoubleTree Guest Suites, 11355 N. Meridian St., (317) 844-7994
2. Hampton Inn Downtown, 105 S. Meridian St., (317) 261-1200
3. Hampton Inn NorthWest, 7220 Woodland Dr., (317) 290-1212
4. Holiday Inn Select North, 3850 DePauw Blvd., (317) 872-9790
5. Homewood Suites, 2501 E. 86th St., (317) 253-1919
6. Marriott North, 3645 River Crossing Pkwy., (317) 705-0000
7. Sheraton Indianapolis Hotel and Suites, 8787 Keystone Crossing, (317)846-2700
8. Signature Inn North, 3910 Payne Branch Rd., (317) 872-5656
9. Signature Inn West, 3850 Eagle View Dr., (317) 299-6165

Information for Student Presenters

The Indiana Section of the MAA awards free memberships to all students who present papers at an Indiana Section meeting. The recipients of these memberships are allowed to select any one journal. In case the prize winner is already a member, an MAA-published book can be substituted for the membership

2003 ICMC

All colleges and universities throughout the state are invited to register three-member teams of undergraduate students to compete in the Indiana Mathematics Competition (ICMC). This year's contest will mark the 38th anniversary of the competition. It will take place at Butler University in conjunction with the Indiana Section Spring Meeting.

The competition will be held Friday afternoon, March 28, starting with on-site registration from 3:00-4:00pm. A briefing session on the competition will begin at 4:00pm and the test will be administered from 4:15-6:15pm immediately following the briefing. The math competition is held on Friday afternoon so that students have the opportunity to fully participate in the MAA meeting held during Friday evening and all day Saturday. The test will be graded overnight and the winning teams announced at the business meeting on Saturday afternoon.

The ICMC is designed as a team competition, with members of the team working together on the test and turning in a single team solution for each problem attempted. No books, calculators, computers, slide rules, rulers, compasses, or other such aides will be allowed in the testing rooms. The contest questions are designed in such a way that a calculator provides no significant advantage to any team.

Each school may enter as many teams as desired; those teams must register in advance. There is a \$5.00 registration fee per team. Team members wishing to attend the dinner and luncheon must also make reservations. (See ACCOMODATIONS and MEAL RESERVATIONS above.)

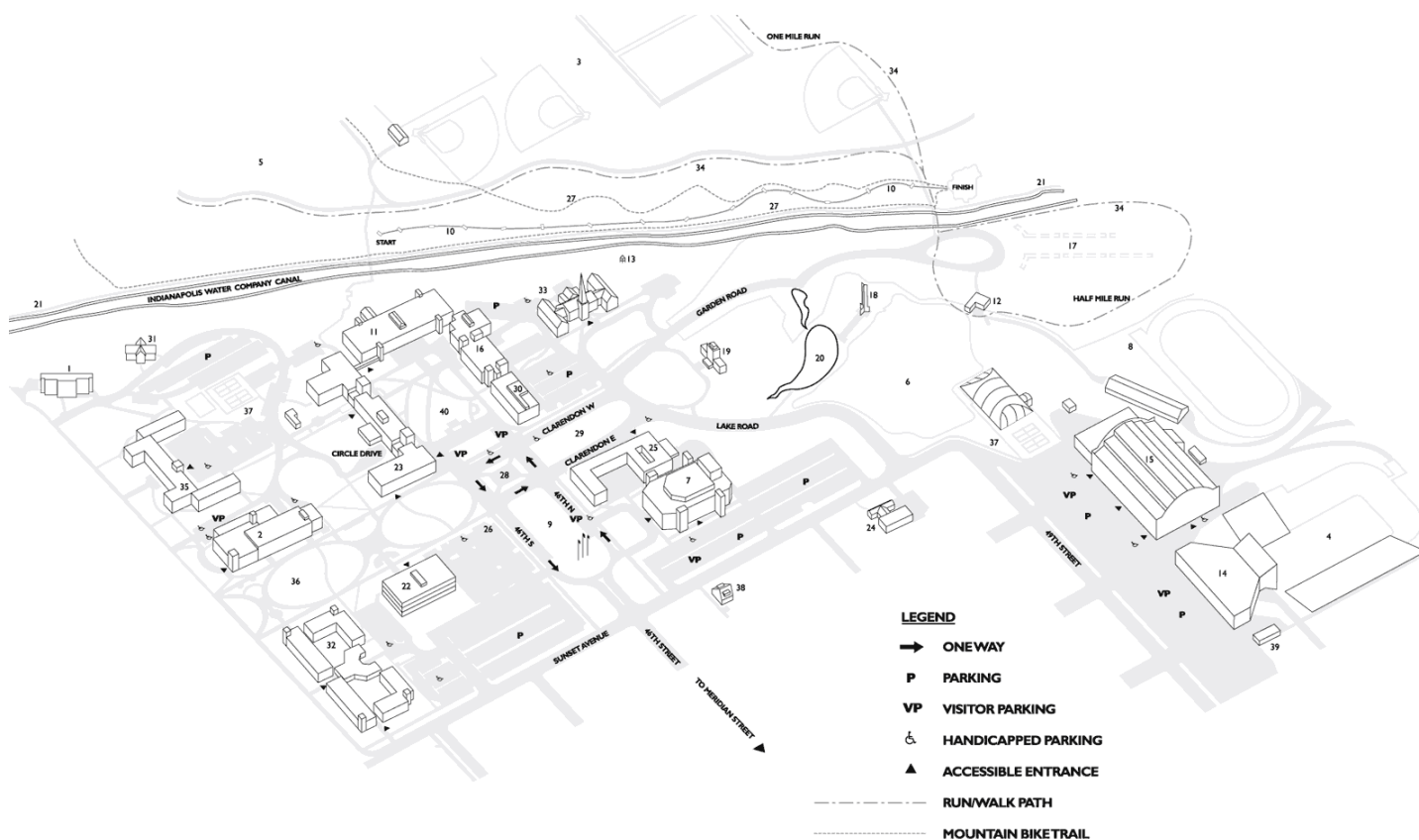
It is *strongly recommended* that teams pre-register for ICMC, so that the host institution can reserve enough rooms for the contest. Teams that pre-register will be guaranteed admission to the contest, while those teams that register on-site will be granted admission provided that space is available.

Teams may pre-register online by visiting the INMAA website <http://www.maa.org/indiana>. Teams may also contact Amos Carpenter to pre-register (see contact information below).

2002 NExT-IN Fellows

Informal gatherings for NExT-IN fellows will occur at the Spring Section Meeting. For more information, contact either Joe Stickles (js298@evansville.edu) or Mike Axtell (axtellm@wabash.edu).

Campus Map (Gallahue Hall, on the northern edge of campus and labeled 11 on the map below, is the main meeting site. For a larger version, see http://www.butler.edu/admissions/adm_vis_campusmap.asp)



Local Organizer

For general information regarding the meeting contact Amos Carpenter ((317) 940-9436, acarpent@butler.edu).

NEWS FROM AROUND THE MAA

Professional Enhancement Program

The MAA's Professional Enhancement Program (PREP) will offer a wide variety of workshops during summer 2003. PREP workshops offer you the chance to spend a few days exploring topics of mutual interest with colleagues from other institutions, with experienced leaders to guide the group towards a deeper understanding and broader perspective. Most of the cost of attending a PREP workshop is covered by the program, so what

are you waiting for? Visit the PREP web site, <http://www.maa.org/prep> to see this year's schedule and to obtain registration materials.

Preparing Mathematicians to Educate Teachers

A growing set of national reports calls for better preparation of the nation's mathematics teachers by mathematics faculty. To help meet this need, the MAA is organizing a multifaceted program, Preparing Mathematicians to Educate Teachers (PMET). The PMET program will have three major components:

- (1) Faculty Training: Workshops of varying duration throughout the year and minicourses at professional meetings;
- (2) Information and Resources: Articles in professional journals, panels at meetings, multimedia web sites and hard-copy material to support faculty instruction for teachers;
- (3) Mini-grants and Regional Networks: To nurture and support grassroots innovation in teacher education on individual campuses. The initial regional networks will be in California, New York, North Carolina, Nebraska, and Ohio.

An extensive article on the PMET program and how MAA members can participate will appear in the March issue of FOCUS.

Project NExT faculty who are interested in attending a PMET workshop should visit the PMET web site for more information. <http://www.maa.org/pmet>

SECTION NEWS

Ball State University

The Mathematical Sciences Department welcomes Dr. Beverly Hartter from Illinois State University. Dr. Hartter has accepted a tenure-track position in mathematics education.

Earham College

The Mathematics Department reports strong participation in the ICM/MCM contest this year, with five teams competing.

Indiana University Northwest

The IUN Department of Mathematics and Actuarial Science is proud to announce that Dr. Iztok Hozo is this year recipient of the Indiana University Founder's Award for excellence in teaching.

The department has hired Dr. Bogdan Vajiac (Ph. D., University of Notre Dame) as an assistant professor with expertise in geometry and topology.

Mr. William Odefey (M.A, Indiana University) and Ms. Stela Pudar-Hozo (Post Baccalaureate Certificate, Purdue University and Equivalent of M.A., Indiana University) have joined the department as lecturers. Mr. Odefey's expertise is in actuarial science and Ms. Pudar-Hozo's in statistics.

Dr. Le Roy Peterson has retired after 31 years and Dr. John Synowiec has retired after 29 years with the Department.

IUN Math Club will sponsor a group of students to attend the 38th Annual Indiana College Math Competition at Butler University.

IUPUI

It is with the deepest sorrow that we inform you of the untimely passing of our dear colleague and friend Yuri Abramovich. Last night, on February 5, at 9:45 PM in the IU Hospital, surrounded by his family, doctors and

friends, Yuri succumbed to Multiple Myeloma, a terrible disease that he has been battling with for the past four years. Our heart-felt condolences to his wife, Alla, and his two daughters, Julia and Jane.

In memory of Yuri, the Department has established the Yuri Abramovich Memorial Scholarship. Memorial contributions to this scholarship fund may be made to the IUPUI Department of Mathematical Sciences.

Indiana University South Bend

The Mathematics Department is pleased to report that a B.S. program in actuarial science has recently been approved.

Purdue University

Purdue West Lafayette's Departments of Mathematics and Statistics anticipate the renewal of their VIGRE grant which will bring continuing support for undergraduate research, graduate students, and postdoctoral faculty for two more years.

Jean E. Rubin, Professor of Mathematics at Purdue, West Lafayette, died October 25, 2002 in Lafayette Indiana. After earning her Ph.D. from Stanford in 1955, she taught at Oregon and Michigan State before going to Purdue in 1967. She was the author of more than 40 research papers and five books on set theory. Much of her research centered on questions related to the axiom of choice. In addition to her research, her colleagues remember her untiring service to the Math Department, especially her work to obtain scholarships for talented undergraduate math majors. (With that in mind, a Jean E. Rubin Memorial Scholarship Fund has been set up; checks made out to "Purdue Foundation" with a note that it is for this fund can be sent to the Head, Department of Mathematics to honor her memory.) Surviving with her husband, Herman Rubin, Professor of Statistics at Purdue, are a son, Arthur L. Rubin of Brea, California, and a daughter, Leonore A. Findsen of Orlando, Florida.

Purdue University Calumet

After a two-year hiatus the Purdue University Calumet Annual High School Mathematics Competition is back. This year it will be held on Saturday, March 29. Teams of three students compete solving problems where the problems do not require calculus or calculators. Each team of three will have two hours to submit solutions to 12-14 problems where the explanation of the solution is as important as the solution itself. High schools that are interested in competing should contact Betty Jahr-Schaffrath at the Department of Mathematics, Computer Science and Statistics, Purdue University Calumet, 2200 169th Street, Hammond, IN 46323. If additional information is desired Professor Schaffrath can be contacted at (219)989-2272 or by email at schaffra@calumet.purdue.edu. Deadline for applications is March 14.

Valparaiso University

Valparaiso University has established a new major in Actuarial Science. Faculty from the mathematics, economics, finance, and information & decision sciences departments serve on the administrative committee for the major, including mathematicians Kim Pearson and David Hull. Student response has been enthusiastic and the program already has 5 majors, including Briana Ehrhardt, who will complete a double major in actuarial science and mathematics.