Fall 2002 SECTION MEETING

Indiana University Northwest
Gary, Indiana
Saturday, October 5, 2002

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Indiana Section Web Page: http://www.maa.org/indiana
FUTURE MEETINGS

Section

Spring 2003: Butler University, Indianapolis, IN, March 28-29

Fall 2003: Goshen College, Goshen, IN, TBA

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

National


Other Meetings

Midwest History of Mathematics Conference: Miami University, Oxford, OH, October 4-5, 2002

Central Section AMS Meeting: University of Wisconsin-Madison, Madison, WI, October 12-13, 2002

Fall 2002 Ohio Section Meeting: Kent State University Trumbull Campus, Warren, OH, October 25-26, 2002

STATEMENT FROM RICK GILLMAN (CHAIR OF THE INDIANA SECTION)

Welcome back to another year! The executive committee of the Indiana Section has planned a very interesting program for the year and is making other changes that we expect to be well received by the members.

As you can read, our fall meeting will be at IU Northwest in a few weeks. The highlights of this meeting include the NEXT-IN workshop being lead by Mike Axtell and Joe Sickles. If you have younger colleagues - or you are a younger colleague - please invite them to participate in this program. It is an excellent way to meet other mathematicians in the state and to begin to be active in the section. Other highlights of the program are the talks by Jody Sorensen, a co-winner of the 2001 Polya Award for Expository Writing, and Tina Straley, Executive Director of the MAA.

Also note that the executive committee will be bring by-law changes to the meeting for your approval. This are described elsewhere in this newsletter.

At our spring meeting, 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.

There will be a major change of procedure for the spring meeting. 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.
As you may be aware, last winter I had the VU Community Research and Service Center conduct an on-line survey of the section membership. There was a good response rate to the survey, and it yielded information much as you might suspect. Our membership is generally older and has spent many years in the MAA; this suggests that we need to continue to work to get our younger colleagues active in the MAA by showing them the benefits of membership and participation. The survey also vividly demonstrated that the members have very diverse interests. The executive committee is continually working to provide a range of programming interests, but if we aren’t providing something that you think we should, let us know.

Have a good year! I’m looking forward to seeing you at IUN in a few weeks.

FALL MEETING HIGHLIGHTS

Speakers will include:

• Reza Akbari - Saginaw Valley State University

  **Hilbert Problems on Sphere**

  The Hilbert problems of the theory of analytic functions on sphere are investigated. Applications of the solutions of these problems to the development of the theory of singular integral equations are described.

• Jody Sorensen  Grand Valley State University (TBA)

• Tina Straley - Executive Director of MAA (TBA)

• Peter Turbek - Purdue University, Calumet

  **Surfaces with Maximal Symmetry**

  A symmetry of a Riemann surface is an involution which preserves angles symmetry is called a Klein surface. In this talk, we consider Klein surfaces that possess a maximal degree of symmetry and describe recent research pertaining to them. The relationship between these surfaces, combinatorial group theory, real algebraic curves, and tessellations of the upper half plane will be explored.

• Karen Whitehead - Valparaiso University (TBA)

For updates on the fall meeting schedule, please see http://www.valpo.edu/organization/lumina/fallprogram.html.

FALL 2002 MEETING INFORMATION

Directions to Indiana University Northwest

• **From the south:** Take I-65 north to I-94/I-80 west. After two miles on I-94/I-80 west take exit 10A to Broadway south. The IUN campus will be on the right (west) after 1/4 of a mile.

• **From the east:** Take I-94/I-80 west to exit 10A. Proceed on Broadway south. The IUN campus will be on the right (west) after 1/4 of a mile.

• **From the west:** Take I-94/I-80 east to exit 10A. Proceed on Broadway south. The IUN campus will be on the right (west) after 1/4 of a mile.
Meeting Registration and Parking

The MAA meeting will take place in the Savannah Center (labeled SC on the campus map below). Participants will be able to park in student spaces (labeled as “parking for students only”) of the parking lot at the southwest corner of 33rd Street and Broadway. The parking fees will be waived in these spaces, both on Friday, October 4th and Saturday, October 5th, 2002.

Registration will begin at 8:30am on Saturday in the Savannah Lobby. 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.

Meal Reservations

An appetizer buffet lunch will be held from 11:45am to 1:00pm in the Library Conference Center, Rooms A, B, and C (labeled LC on the campus map below). The lunch includes fried vegetables, meatballs, chicken wings, mini corn dogs and cocktail smokies or jalapeno cheese poppers, fresh vegetable tray with party dip, meat and cheese cube tray with variety snack crackers and seafood combo tray. Iced tea or punch will be available for drinks.

The lunch costs $7.50 per person, and participants should make advanced reservations for lunch at least one week prior to the meeting. The contact person is Ms. Candy Myers (cmyers@iun.edu, (219) 980-6590, FAX: (219) 981-4247).

Accommodations

- **Lees Inn** (6201 Opportunity Lane, Merrillville, IN, 46410, (219) 942-8555)
  - **Price:** $65+TAX until 9/04/02 for executive suite, king suite, or queen double. Mention IUN Math. Department.
  - **Directions:** I-65 and 61st Avenue, Exit 255 (east of I-65, south of 61st).

- **Fairfield Inn** (8275 Georgia Street, Merrillville IN 46410, (219) 736-0500)
  - **Price:** $69+TAX until 09/04/02 for king single or queen double. Mention IUN Math. Department.
  - **Directions:** I-65 and U.S. 30, Exit 255 (west of I-65, south of U.S. 30).

Please reserve your room early. Due to construction at the 255 exit of I-65, guests are encouraged to call the hotel a few days before their arrival to check which exit to take.
DE Dental Education; HH Hawthorn Hall; LC Library/Conference Center; LH Lindenwood Hall; ME Medical Education; MH Marram Hall; MS Moraine Student Center; RH Raintree Hall; SC Savannah Center; SH Sycamore Hall; TH Tamarack Hall; CC Child Care Center; CP Chiller Plant; MR Mailroom; PE Professional Education; PP Physical Plant; R Bus Stops; P Permit Parking; MP Metered Parking

INFORMATION FOR STUDENT PRESENTERS

The Indiana Section of the MAA will now award 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

PROJECT NExT-INDIANA

Project NExT-IN (New Experiences in Teaching), a program of the Indiana section of the Mathematical Association of America which is an offshoot of the national Project NExT, is a year-long program geared toward new or recent doctoral recipients in the mathematical sciences who are employed by Indiana colleges or universities. While the national Project NExT requires applicants to be no more than two years removed from confirmation of their doctorate, we at Project NExT-IN will accept applications from any faculty interested in participating. We especially encourage those who are new to the Indiana section and those who are pre-tenure to apply. Through a series of workshops in conjunction with the semi-annual Indiana Section MAA meetings, as well as through informal chats, participants will explore key aspects of life in academia while building lasting relationships with other participants and with senior faculty mentors from around the region. The following
topics are representative of issues to be addressed:

- Beginning and maintaining a research program
- Balancing teaching, research, and service
- Undergraduate mathematics education
- Undergraduate research opportunities
- Grant writing

Workshops for this year will be held on October 4-5, 2002, at Indiana University-Northwest in Gary, and on March 28-29, 2003, at Butler University in Indianapolis.

For more information go to http://www2.evansville.edu/js298/projectnext.html. For an application, see http://www2.evansville.edu/js298/projectnextapp.html. Or, contact Joe Stickles (js298@evansville.edu) or Mike Axtell (axtellm@wabash.edu)

SECTION NEWS

Ball State University

The Mathematical Sciences Department welcomes two new tenure-track faculty:

- Dr. Vania Mascioni, Associate Professor (Ph.D., The University of Zurich, 1988, Banach spaces)
- Dr. Rich Stankewitz, Assistant Professor (Ph.D., The University of Illinois at Champaign-Urbana, 1998, complex dynamics)

Dr. Giray Okten has been promoted to Associate Professor, effective Fall 2002.

Indiana-Purdue University at Fort Wayne

Matthew Walsh has joined the department as Assistant Professor; he received his Ph.D. in graph theory from Auburn University earlier this year.

John Osowski has accepted a position as Continuing Lecturer.

Marc Lipman has rejoined the department, returning to IPFW as Dean of the School of Arts and Sciences.

Arthur Finco retired after 37 years at IPFW.

Indiana University Northwest

The IUN Department of Mathematics and Actuarial Science has hired Dr. Bogdan Vajiac (Ph. D., University of Notre Dame) as an assistant professor. Dr. Vajiac’s expertise is in geometry and topology. Also, Mr. William Odefey (M.A., Indiana University) and Ms. Stela Pudar-Hozo (Post Baccalaureate Certificate, Purdue University and Equivalent of M.A., Indiana University) will join 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.

Purdue University

This Fall, the Purdue University, West Lafayette, Mathematics Department welcomes three new faculty members, Jie Shen as Professor and Min Chen and Jarek Włodarczyk as Associate Professors; Greg Buzzard joined the faculty as Associate Professor in January 2002. Professors Shen and Chen work on fluid dynamics, Professor Włodarczyk studies algebraic geometry, and Professor Buzzard studies complex dynamics. Last Spring, Freydoon Shahidi was appointed a Distinguished Professor of Mathematics for his work on automorphic forms and representation theory related to analytic number theory. It is particularly gratifying that Professor Shahidi is being recognized for work he has done at Purdue over the 25 years since he joined the faculty as an Assistant Professor. Also, Professor Alex Eremenko received the McCoy Award, Purdue’s premier recognition for research, for his discovery, with Mario Bonk, of the Bloch constant for meromorphic functions. Professor Leonard Lipshitz was appointed Head of Purdue’s Mathematics Department, effective July 1, 2002.

Purdue University North Central

Mr. Jerry De Groot joined the faculty of Purdue University North Central as a Continuing Lecturer in August 2002. Jerry comes to PUNC from California where he taught high school Mathematics and Physics for over twenty years as well as having taught mathematics as an adjunct faculty member a several institutions of higher education, including Chapman University. Jerry recently completed a Masters Degree in Mathematics from the University of California at Davis. He also holds a B.A. degree in Secondary Education in Mathematics and Physics from Dordt College in Iowa (1976) and M.A. Degree in Mathematics Education from the University of Northern Iowa (1983).

Dr. Sheon-Young Kang, Assistant Professor of Mathematics, participated in two conferences in Provdiv, Bulgaria where he delivered the papers "Gauss-Type Quadrature for Fredholm Integral Equation of the Second Kind with Non-Smooth Kernels" at The Eleventh International Conference on Numerical Analysis and Computer Science with Applications, August 12-17, 2002, and the paper "Volterra Type Integral Equation Method for the Radial Schroedinger Equation" at The Thirteenth International Conference on Differential Equations, August 18-23, 2002. Dr. Kang’s papers were based on the results of his research supported by a PUNC summer research grant and his travel was supported by both the PUNC campus and an International Travel Grant from the Purdue Research Foundation.

Mr. Dennis Lauer, Assistant Professor of Mathematics at Purdue University North Central since Fall 1968 will be retiring in December 2002 after a five year early partial retirement participation during which he taught during fall semesters and enjoyed a taste of retirement during the spring semesters. Over the years Dennis has taught nearly all mathematics, statistics, and physics course offered on the PUNC campus and he has also lectured in the "Great Issues" course on our campus. Dennis is a valued friend of students and the faculty on the PUNC campus. He plans to continue teaching part-time on our campus after his retirement in January.

Rose Hulman Institute of Technology

Rose-Hulman welcomes Aleksey S. Telyakovskiy as a visiting assistant professor. His interests are "Mathematical and numerical simulation of groundwater flows and oil reservoirs. Numerical solution of partial differential equations and systems of nonlinear algebraic equations."
Saint Mary’s College

The Mathematics Department at Saint Mary’s welcomes two new faculty members this year: Alan Vlach, most recently at Bethel College, and Lazaros Kikas, coming from Oakland University. Also, we are delighted to announce the opening of our Math Center, a new resource for students needing extra help. The center is directed by Suzanne Cox.

Taylor University

The Taylor mathematics laboratory will be named this fall in honor of William Ewbank. William Ewbank was instrumental in developing one of the first such math laboratories in the country for a school of Taylor’s size. William Ewbank retired from Taylor’s faculty in 1987.

Mark Colgan replaces Jeremy Case as the chair of the Taylor University Mathematics Department. Mark Colgan and Jeremy Case were awarded tenure for the 2002-03, and Mark Colgan was promoted to full professor. Two department members had books published. The MAA published Learning to Teach, Teaching to Learn by Matt DeLong of Taylor University and Dale Winter of Harvard University. David Neuhauser’s book Open to Reason, compares the roles of reason, imagination, and faith in mathematics and religion.

University of Southern Indiana

Mr. Rick Hudson, a 2002 USI graduate with a B.A. in mathematics, received the President’s Medal, the highest award given to a graduating senior. After graduating from USI, Mr. Hudson, a Patoka Indiana resident, enrolled in the University of Louisville’ graduate program to continue his study of mathematics.

New to USI for the fall 2002 semester is Dr. Ruben D. Schwieger. Dr. Schwieger has the Ph.D. in Mathematics Education from Purdue University, M.A. in Mathematics from the University of Arizona, and B.A. from Anderson University (Anderson, Indiana). He has taught at Ohio State University, several liberal arts colleges, and in the University of Ghana system on a Fulbright Fellowship. His special interests are in problem solving, especially in application to mathematics education in the K-College levels. He is an active member of the National Council of Teachers of Mathematics and is active in state as well as regional and national conventions of the NCTM.

Wabash College

Two years ago (fall 2000), Michael Axtell joined the department as a tenure-track assistant professor. He is a ring theorist and Project Next fellow. Mike received his Ph.D. from the University of Iowa in May 2000.

Last year (fall 2001), J.D. Phillips joined the department as Chair. His research is in group theory and generalizations, and automated theorem proving. He received his Ph.D. from Iowa State University in May 1992.

This year (fall 2002), William Turner joined the department as a tenure-track assistant professor. His research is in black box linear algebra. He received his Ph.D. from North Carolina State University in May 2002.

INDIANA COLLEGE MATHEMATICS COMPETITION (ICMC)

Preregistration for 2003 ICMC

Beginning with the 2003 ICMC at Butler University, we strongly recommend that teams pre-register, 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.

To preregister, teams should contact the host institution (Butler University for Spring 2003). The deadline for registration will be the same as that for the spring Section Meeting. Further details will be forthcoming in the Spring Newsletter.

Solutions for the Spring 2002 ICMC

1. If \( f(x) \) is continuous on \([a, b]\), it is possible for the expression \( \frac{f(x)}{f(x)+f(b-x)} \) to be undefined for all \( x \) in the interval \([0, b]\).

   (a) Find a nonzero function \( f(x) \) such that \( f(x) + f(b-x) = 0 \) for all \( x \) in the interval \([0, b]\).
   
   An example of such a function would be \( f(x) = x - \frac{b}{2} \).

   (b) If \( f \) is continuous and positive on \([0, b]\), evaluate \( \int_0^b \frac{f(x)}{f(x)+f(b-x)} \, dx \)

\[
\int_0^b \frac{f(x)}{f(x)+f(b-x)} \, dx = \int_0^b \frac{f(x) + f(b-x) - f(b-x)}{f(x) + f(b-x)} \, dx \\
= \int_0^b \left( 1 - \frac{f(b-x)}{f(x) + f(b-x)} \right) \, dx \\
= b - \int_0^b \frac{f(b-x)}{f(x) + f(b-x)} \, dx
\]

Now, let \( u = b - x \). Then, \( du = -dx \). Also, when \( x = 0 \), we have \( u = b \), and when \( x = b \), we have \( u = 0 \). Hence, we have

\[
\int_0^b \frac{f(x)}{f(x)+f(b-x)} \, dx = b - \int_0^b \frac{f(u)}{f(b-u) + f(u)} \, (-du) \\
= b - \int_0^b \frac{f(u)}{f(u) + f(b-u)} \, du \\
\int_0^b \frac{f(x)}{f(x)+f(b-x)} \, dx + \int_0^b \frac{f(u)}{f(u)+f(b-u)} \, du = b
\]

The variables make no difference in the integrals, so the left-hand side becomes \( 2 \int_0^b \frac{f(x)}{f(x)+f(b-x)} \, dx = b \), and \( \int_0^b \frac{f(x)}{f(x)+f(b-x)} \, dx = \frac{b}{2} \).

2. Let \( \sum a_n \) be a series of strictly positive terms, and let \( b_n = \frac{a_1+a_2+\cdots+a_n}{n} \). Show \( \sum b_n \) diverges.

Since each \( a_i \geq 0 \) for all \( i \geq 1 \), we have \( b_n = \frac{a_1+a_2+\cdots+a_n}{n} \geq \frac{a_1}{n} = a_1 \cdot \frac{1}{n} \). Since the series \( \sum \frac{1}{n} \) diverges, the series \( \sum \frac{a_1}{n} \) diverges, and hence \( \sum b_n \) diverges by the direct comparison test.

3. Show that the sum of two consecutive odd primes at least three (not necessarily distinct) prime factors.

Let \( p \) and \( q \) be consecutive odd primes with \( p < q \). Then, we can write \( p = 2k + l \) and \( q = 2k + m \), where \( l \) and \( m \) are odd numbers with \( l < m \). Then, \( p + q = 2k + l + 2k + m = 4k + l + m \). Since \( l \) and \( m \) are both odd, the sum \( l + m \) is even, and hence we can factor 2 out of the right-hand side to get \( p + q = 2 \left( 2k + \frac{l+m}{2} \right) \). Now, the fraction \( \frac{l+m}{2} \) represents the average of \( l \) and \( m \), and since \( l < m \), we have \( l < \frac{l+m}{2} < m \), and the number \( 2k + \frac{l+m}{2} \) is strictly between \( p = 2k + l \) and \( q = 2k + m \). Since these two primes were consecutive, we must have \( 2k + \frac{l+m}{2} \) is composite, and hence it has at least two prime factors. Thus, the sum of two consecutive odd primes has at least three prime factors.
4. A university bookstore sold at least one mathematics textbook each day for 100 consecutive days. During this time, the bookstore sold 140 mathematics textbooks. Was there a period of consecutive days when exactly 59 mathematics textbooks were sold?

Let \( a_n \) denote the total number of books sold on day \( n \). Hence, we have \( 1 \leq a_1 < a_2 < a_3 < \cdots < a_{100} = 140 \). Adding 59 to each above term gives \( 60 \leq a_1 + 59 < a_2 + 59 < a_3 + 59 < \cdots < a_{100} + 59 = 199 \).

Now, the list \( a_1, a_2, \ldots, a_{100}, a_1 + 59, a_2 + 59, \ldots, a_{100} + 59 \) is a list of 200 numbers that lie between 1 and 199, inclusive. Hence, there must be two numbers in the list that have the exact same value. Since \( a_1 < a_2 < \cdots < a_{100} \), we know \( a_i \neq a_j \) for any \( i \neq j \). Similarly, we cannot have \( a_i + 59 = a_j + 59 \) for \( i \neq j \). Hence, we must have \( a_i - a_j = 59 \). The quantity \( |a_i - a_j| \) represents the number of books sold between day \( j + 1 \) and day \( i \). Hence, there were exactly 59 books sold from day \( j + 1 \) until day \( i \).

5. Let \( \varphi \) be a function from a set \( S \) with a binary operation (denoted by juxtaposition) to the set of nonnegative integers such that \( \varphi(xy) = \varphi(x) \varphi(y) \) for all \( x \) and \( y \) in \( S \).

(a) If \( S \) is a group and the binary operation is the group operation, show that either \( \varphi(x) = 0 \) for all \( x \) in \( S \), or \( \varphi(x) = 1 \) for all \( x \) in \( S \).

Let \( e \) be the identity of \( S \). If there exists an \( x \in S \) such that \( \varphi(x) = 0 \), then

\[
\varphi(e) = \varphi(xx^{-1}) = \varphi(x) \varphi(x^{-1}) = 0 \cdot \varphi(x^{-1}) = 0
\]

and for any other \( y \in S \), we have

\[
\varphi(y) = \varphi(ey) = \varphi(e) \varphi(y) = 0 \cdot \varphi(y) = 0
\]

and hence \( \varphi(x) = 0 \) for all \( x \in S \).

Now, suppose \( \varphi(x) \neq 0 \) for all \( x \in S \). Then,

\[
\varphi(e) = \varphi(ee) = \varphi(e) \varphi(e) = (\varphi(e) \neq 0)
\]

and for any \( x \in S \), we have \( \varphi(x) = \varphi(xx^{-1}) = 1 = \varphi(x) \varphi(x^{-1}) \). Since \( \varphi(x) \) and \( \varphi(x^{-1}) \) are nonnegative integers with product 1, we must have \( \varphi(x) = 1 \). Hence, \( \varphi(x) = 1 \) for all \( x \in S \).

(b) If \( \varphi \) is a nonconstant function, \( S \) is a ring, and the binary operation is the ring multiplication, show that \( \varphi(0S) = 0 \).

If \( \varphi(0S) \neq 0 \), then for all \( x \in S \), we get

\[
\varphi(0S) = \varphi(0S \cdot x) = \varphi(0S) \varphi(x)
\]

which contradicts \( \varphi \) being nonconstant. Hence, we must have \( \varphi(0S) = 0 \).
6. Show that a square inscribed in a triangle can enclose at most one-half the area of the triangle.

First, we need the fact that for any numbers \( b \) and \( h \), we have

\[
\begin{align*}
(b - h)^2 & \geq 0 \\
b^2 - 2bh + h^2 & \geq 0 \\
b^2 + h^2 & \geq 2bh
\end{align*}
\]

Now, we notice that the square “divides” the triangle into a trapezoid with bases \( b \) and \( s \) and a height of \( s \), and a triangle with base \( s \) and height \( h - s \). We must have the sum of these areas equal the total area of the triangle; hence, we have

\[
\begin{align*}
\frac{1}{2} s (b + s) + \frac{1}{2} s (h - s) & = \frac{1}{2} bh \\
bs + s^2 + sh - s^2 & = bh \\
s (b + h) & = bh \\
s^2 (b + h)^2 & = b^2 h^2 \\
s^2 (b^2 + 2bh + h^2) & = b^2 h^2 \\
s^2 (2bh + 2bh) & \leq b^2 h^2 \text{ by above} \\
s^2 (4bh) & \leq b^2 h^2 \\
s^2 & \leq \frac{1}{4} bh = \frac{1}{2} \left( \frac{1}{2} bh \right)
\end{align*}
\]

Hence, the area of the square is at most one half the area of the triangle.
SECTION AWARDS

2002 Awards

The 2002 Distinguished Service Award was received by Stephan Carlson (Rose Hulman Institute of Technology), while the 2002 Award for Distinguished College or University Teaching of Mathematics went to Mic Jackson (Earlhame College). Full text of their citations may be found at

http://www.rose-hulman.edu/ rader/INMA/srvcawrd/Carlson.html

and

http://www.rose-hulman.edu/ rader/INMA/tchawrd/Jackson.html,

respectively.

Call for Nominations for the Indiana Section Award for Distinguished College or University Teaching of Mathematics

Nominations for the twelfth annual Indiana Section Award for Distinguished College or University Teaching of Mathematics are now being welcomed. The Indiana Section Selection Committee will choose one of the nominees for the Section Award. The awardee will be honored at the 2003 Spring Section meeting and will be widely recognized and acknowledged within the Section. The awardee will also be the official Section candidate for the pool of Section awardees from which the national recipients of the Deborah and Franklin Tepper Haimo Awards will be selected (except that one of the national winners may be selected from another source). There will be at most three national awardees, each of whom will be honored at the national MAA meeting in January 2004 and receive a $1000 check and a certificate.

Anyone is entitled to make a nomination, but nominations from mathematics department chairs are especially solicited. Although it is not mandatory, involvement of a nominee in preparing the nomination packet is permitted and encouraged. However, self-nomination is not permitted. A previous nominee for this award who did not become a Section awardee can be nominated again. Indeed, the Section has instructed the selection committee that “meritorious nominations for the Distinguished Teaching Award which do not result in an award will be continued as active nominations for next year’s Distinguished Teaching Award and, if again not successful, will be continued for a third year as well.”

Eligibility

• College or university teachers assigned at least half-time during the academic year to teaching of 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

Nominees should
• be widely recognized as extraordinarily successful in their teaching\(^1\)
• have teaching effectiveness that can be documented
• have had influence in their teaching beyond their own institution\(^2\)
• foster curiosity and generate excitement about mathematics in their students

Nominations must be submitted on the official “Nomination Form,” a copy of which may be obtained from David Housman by using the address listed below or by e-mail dhousman@goshen.edu. 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 (as stated on page two 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:

David Housman, Department of Mathematics
Goshen College, Goshen, IN 46526

so as to be received no later than January 6, 2003.

The Section Selection Committee will select the Section awardee prior to February 3, 2003, at which time it will communicate its selection to the national selection committee so that the national committee can then make its selections. 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 schools. We depend on you to help us identify those who merit such recognition.

BYLAWS AMENDMENT PROPOSAL

At its May 2002 meeting, the Indiana Section of the MAA Executive Board voted to propose the first four of the following five proposed amendments to the Bylaws for the Indiana Section of the Mathematical Association of America, Incorporated. The fifth proposed amendment represents changes to the Bylaws suggested by the Committee on Sections at the 2002 MathFest. In order to be enacted, each amendment needs a two-thirds vote of the members present at the October 5, 2002 Section meeting to be held at Indiana University Northwest. The current Bylaws and the amended version can be found at the Section web site.

1. Split the Secretary-Treasurer position into two positions (a Secretary and a Treasurer) in order to distribute the responsibilities and workload. This entails the following changes:

   a. In Article III, section 1, replace “and a Secretary-Treasurer” with “a Treasurer, and a Secretary.”
   b. In Article III, section 4, replace “The Secretary-Treasurer shall serve a three-year term, which may be extended annually thereafter by the Section at its annual meeting,” with “The Treasurer and Secretary shall each serve a three-year term, which may be extended annually thereafter by the Section at its annual meeting.”
   c. Remove Article III, section 7c.
   d. Add a new Article III, section 7c: “The Treasurer shall
      i. be custodian of the financial records of the Section,

\(^1\)“teaching” should 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, or attracting students to become majors in a mathematical science).

\(^2\)“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.
ii. collect contributions from the members and from the national organization,
iii. keep the funds of the Section, pay bills, and maintain careful records of income and expenses,
iv. report on the state of the treasury at the annual meeting, and
v. be empowered to spend Section funds on behalf of the Section membership.”

2. Change the position “Student Chapter Coordinator” to “Student Activities Coordinator” in order to reflect more accurately the duties of the position. This entails the following changes:

   a. In Article III, section 2, replace “Student Chapter Coordinator” with “Student Activities Coordinator”.
   b. In Article III, section 6, replace “Student Chapter Coordinator” with “Student Activities Coordinator”.

3. Change the amendment notification process to allow text of the proposed changes to appear on a web site saving postage costs. This entails the following changes:

   a. Change Article VII, section 2 to read: “Every member of the Section will be notified of a proposed amendment at least fifteen days prior to the time of voting.”

4. Consistent with long-time practice, give official Board standing to the Indiana State Director for American Mathematical Competitions. This entails the following changes:

   a. Change Article III, section 2 to read: “This Section shall have an Executive Board of which the regular members shall be the officers of the Section, the immediate past Chair, the Section Governor, the Newsletter Editor, the Student Activities Coordinator, and the Public Information Officer. Current Indiana State Directors for American Mathematics Competitions shall sit on the Executive Board as non-voting ex officio members.”
   b. Change Article III, section 3 to read: “Each regular member of the Executive Board must be a member of the national organization and of this Section.”

5. Make rather minor editorial changes suggested by the Committee on Sections. This entails the following changes:

   a. In Article I, delete the word “Incorporated” (and associated commas, as necessary) in sections 1 and 2.
   b. In Article III, section 9, change “replacemet” to “replacement.”
   c. In Article IV, section 1, enclose the phrase “at its discretion” between commas.
   d. In Article IV, section 2, capitalize the letter S in the last occurrence of the word “section.”
   e. Complete Article VII, section 1 as follows: “…subject to approval of the Board of Governors of the national organization upon recommendation by the Committee on Sections.”
   f. In Article VII, section 1, change the word “will” to “shall.”