AMERICAN MATHEMATICAL SOCIETY
EXECUTIVE COMMITTEE AND BOARD OF TRUSTEES
MAY 19-20, 2006
ANN ARBOR, MICHIGAN

MINUTES

A joint meeting of the Executive Committee of the Council (EC) and the Board of Trustees (BT) was held Friday and Saturday, May 19-20, 2006, at the Campus Inn Hotel in Ann Arbor, Michigan.

The following members of the EC were present: James G. Arthur, Sylvain E. Cappell, Robert J. Daverman, James G. Glimm, Robert M. Guralnick, and Paul J. Sally, Jr. Walter Craig was unable to attend.

The following members of the BT were present: James G. Arthur, John M. Franks, Eric M. Friedlander, Linda Keen, Donald E. McClure, Jean E. Taylor, and Carol S. Wood (Saturday only). John B. Conway was unable to attend.

Also present were the following AMS staff members: Gary G. Brownell (Deputy Executive Director), Kevin F. Clancey (Executive Editor, Mathematical Reviews), John H. Ewing (Executive Director and Publisher), Ellen H. Heiser (Assistant to the Executive Director [and recording secretary], Elizabeth A. Huber (Deputy Publisher), Ellen J. Maycock (Associate Executive Director, Meetings and Professional Services), Constance W. Pass (Chief Financial Officer), and Samuel M. Rankin (Associate Executive Director, Government Relations and Programs).

President James Arthur presided over the EC and ECBT portions of the meeting (items beginning with 0, 1, or 2). Board Chair Jean Taylor presided over the BT portion of the meeting (items beginning with 3).

Items occur in numerical order, which is not necessarily the order in which they were discussed at the meeting.

0	CALL TO ORDER AND ANNOUNCEMENTS

0.1 **Opening of the Meeting and Introductions.**

President Arthur convened the meeting and everyone introduced themselves.

0.2 **Housekeeping Matters.**

Executive Director Ewing informed the ECBT about several housekeeping matters related to the present meeting.

1I	EXECUTIVE COMMITTEE INFORMATION ITEMS

1I.1 <u>**Secretariat Business by Mail**</u>**.** **Att. #1.**

Minutes of Secretariat business by mail during the months December 2005– March 2006 are attached (#1).

2	EXECUTIVE COMMITTEE AND BOARD OF TRUSTEES ACTION/DISCUSSION ITEMS

2.1 <u>**Report on Mathematical Reviews Editorial Committee (MREC)**</u>**.**

The ECBT was informed that the MREC has not met since the last ECBT meeting and there is nothing new to report at this time. The next MREC meeting is October 16, 2006.

2.2 <u>**Report on Committee on Publications (CPub)**</u>**.**

The ECBT was informed that CPub has not met since last fall. The new Chair is Beverly Diamond, who has taken over from Jonathan Wahl. During the current year, as part of its normal cycle of reviews, the Committee will review the primary AMS research journals. The next CPub meeting is September 15-16, 2006.

2.3 <u>**Report on Committee on the Profession (CoProf)**</u>**.**

The ECBT was informed that CoProf held its most recent meeting on September 24-25, 2005; a report of that meeting was included in the November 2005 ECBT minutes. A revised statement on the employment of recent graduates was tabled by the January 2006 Council. After some discussion among CoProf members by email, CoProf decided to address the issues raised in the revision during its next meeting on September 16-17, 2006.

2.4 <u>**Report on Committee on Education (COE)**</u>**.**

The ECBT was informed that the next COE meeting will be held October 19-21, 2006 in Washington, DC.

COE hosted a panel discussion at the Joint Mathematics Meetings in San Antonio, TX entitled "International Perspectives on Undergraduate Mathematics," which described various issues facing undergraduate mathematics in different countries.

2.5 <u>**Report on Committee on Meetings and Conferences (COMC)**</u>**.** **Att. #2.**

The ECBT received the attached report (#2) on the March 18, 2006 COMC meeting.

2.6   <u>**Report on Committee on Science Policy (CSP)**</u>. <mark>**Att. #27**</mark>.

The ECBT received the attached report (<mark>Att. #27</mark>) on the April 25-27, 2006 CSP meeting.

2.7   <u>**Washington Office Report**</u>. <mark>**Att. #3**</mark>.

The ECBT received the attached report (<mark>#3</mark>) on recent Washington Office activities.

2.7.1   <u>**Report from the President**</u>.

President Arthur gave an oral report on the April 29, 2006 Einstein Lecture at San Francisco State University. Benoit Madelbrot gave the Lecture on "The Nature of Roughness in Mathematics, Science, and Art."

2.8   <u>**Report on Long Range Planning Committee (LRPC)**</u>.

It was reported that the LRPC met on May 19, 2006; the primary topic of discussion was public awareness and public relations, looked at from a high-level strategic viewpoint.

2.9   <u>**2007 Journal Pages and Prices**</u>.

The ECBT approved the following numbers of pages, and the BT approved the following prices, for 2007 journal subscriptions:

	2007 pages	**2007 list prices**
Abstracts of Papers Presented to the AMS*	700*	$132
Bulletin of the AMS	640	$418
Conformal Geometry and Dynamics	200	$25
Current Mathematical Publications*	4,591*	$687
Electronic Research Announcements	200	free
Journal of the AMS	1,000	$287
Mathematical Reviews*		
Issue pages	11,048*	
Annual index pages	6,330*	
Total MR pages	17,378*	
MR Products		
Paper		$586
MR Sections		$167
Data Access Fee		$7,613
MathSciDisc		$2,226
MathSciNet		$2,226
MathSciNet & MathSciDisc		$3,102
Mathematics of Computation	2,000	$486
Memoirs of the AMS	3,200	$649

	2007 pages	2007 list prices
Notices of the AMS	1,550	$430
Proceedings of the AMS	3,520	$1,063
Representation Theory	500	$25
*St. Petersburg Mathematical Journal**	1,208*	$1,722
Sugaku Expositions	240	$192
*Theory of Probability and Mathematical Statistics**	324*	$659
Transactions of the AMS	5,500	$1,744
*Transactions of the Moscow Mathematical Society**	259*	$466
*the numbers of pages for these journals are not completely within the staff's control, so they are currently the staff's best estimates and were included in the version of the 2006 budget presented at this meeting.		

2.10   Report on the Book Program. Att. #5.

The ECBT received the attached report (#5) on the book program.

2.11   2007 Institutional Dues.

The ECBT approved an average increase of 3% for institutional members for 2007.

2.12   Registration Fees for the January 2007 Joint Mathematics Meetings.

The ECBT reviewed budget summaries for the January 2007 New Orleans Joint Meetings and exhibits. Based on this information, the BT voted to advise the Joint Meetings Committee that the member pre-registration fee for this meeting be set at $208.

2.13   Centennial Fellowships for 2007-2008.

The ECBT approved awarding one Centennial Fellowships for 2007-2008, in the amount of $66,000, with an expense allowance of $3,500.

2.14   Update on CID Program. Att. #8.

The ECBT received the following report:

The Carnegie Foundation for the Advancement of Teaching chose mathematics as one of six disciplines to be included in the Carnegie Initiative on the Doctorate (CID). For the mathematics teams, the main point of these gatherings was to explore the purpose of doctoral education in mathematics and to identify specific ways that departments could work on the findings. With the Carnegie Foundation's role in the CID coming to a close this year, representatives from CID mathematics departments submitted the attached proposal (#8) to the Committee on the Profession (CoProf). The proposal calls on the AMS to assume the directing role that the

Carnegie Foundation had played in an effort to help stimulate dialog and promote change among graduate mathematics programs/departments.

CoProf voted unanimously to endorse this proposal and send it forward to ECBT and the January 2006 Council. The Council, in turn, approved the concept of the proposal. The proposal was also the topic under discussion at the Director of Graduate Studies Focus Group at the 2006 Joint Mathematics Meetings. Peter March (Ohio State University), John Meakin (University of Nebraska), and David Morrison (Duke University) continue to work on a document that will aid the preparation of a grant proposal designed to fund this program. The AMS will seek outside funding for this program.

2.15   Y-Research: A Program for Young Research Mathematicians. Att. #9.

The ECBT received the following report:

In 2005, the Committee on Meetings and Conferences (COMC) endorsed exploring new types of conferences on an experimental basis. A subcommittee of COMC, formed to provide a preliminary review of ideas for the conference, met at the 2006 Joint Mathematics Meetings. An idea sparked by the discussion at that meeting has been developed into a full program by staff members. Att. #9 contains the preliminary description of a program that would support young mathematicians as they begin their research careers. The AMS will seek outside funding for this program.

2.16   Congressional Fellow. Att. #10.

The ECBT received the following report:

The AMS, in conjunction with the American Association for the Advancement of Science (AAAS), is sponsoring a Congressional Fellow through August 2006. The Fellow is David Weinreich and he is spending a year working on the staff of Representative Robert Andrews (NJ) as a special legislative assistant in legislative and policy areas requiring scientific and technical input. David has submitted a report on his experience so far, which is attached (#10).

The AMS is currently reviewing applications for the 2006-2007 Congressional Fellow. An announcement of the selection will be made in the *Notices* and posted on the AMS website.

2.17   Star Wars Motions. Att. #11.

The ECBT received the following report:

A letter has circulated in the mathematics community for the past several months and it was been signed by some 50 mathematicians. The letter calls for the AMS to abide by the "Star Wars" resolutions of 1988, which were passed following a particularly contentious Business Meeting of the Society. It also suggests that the Society's staff has not followed the policies of those

resolutions (although the accusation is implicit because it merely points out that the staff has not proven that they have implemented the policies).

Att. #11 contains the letter, the motions passed in 1988, and some additional information about the Society's response to those motions.

2.18   Report on the MR Building Remodel.

The ECBT received the following report:

The Mathematical Reviews (MR) building was purchased about 25 years ago. Over the years, AMS has made many changes to improve the efficiency of its operations, save money, and improve working conditions. Recently, MR made the transition from holding paper back issues of many journals to their electronic counterparts. This has freed up space in the MR building and provided an opportunity to further improve facilities and working conditions. To that end, staff have taken two steps. First, a consulting engineer will examine the building and provide a report on its structural condition that will be of use in anticipating and planning future repairs and maintenance. Second, AMS has contracted with Ann Arbor architect, Lincoln Poley, to design a new conference room and equipment area in the former library ("cemetery") area of the MR building.

Once the structural report is in hand and the design is accepted, the work will be put out for bid.

The cost of this project will likely be large enough to require BT approval, which will probably be requested in November.

2.19   2007 ABC and ECBT Meetings.

The ECBT approved the following dates and sites for 2007 ABC and ECBT meetings:

ABC	March 21, 2007 (Wednesday)	by conference call
ECBT	May 18-19, 2007 (Friday-Saturday)	Providence, Rhode Island
ABC	October 12, 2007 (Friday)	Providence, Rhode Island
ECBT	November 16-17, 2007 (Friday-Saturday)	Providence, Rhode Island

It was noted that the members of the ABC in 2007 will be: Daverman, Franks, Glimm, Keen, and McClure.

**2C EXECUTIVE COMMITTEE AND BOARD OF TRUSTEES
CONSENT ITEMS**

2C.1 November 2005 ECBT Meeting.

The ECBT approved the minutes of the meeting of the Executive Committee and Board of Trustees held November 18-19, 2005, in Providence, Rhode Island, which had been distributed separately. These minutes include:

- ECBT open minutes prepared by the Secretary of the Society (http://www.ams.org/secretary/ecbt-minutes/ecbt-minutes-1105.pdf),
- ECBT "open" executive session minutes prepared by the Secretary of the Society.

See also item 3C.2.

**2I EXECUTIVE COMMITTEE AND BOARD OF TRUSTEES
INFORMATION ITEMS**

2I.1 Changes in Reimbursement for Ground Transportation.

The AMS travel policy specifies a maximum reimbursement for ground transportation per trip to be $100. This amount was set in 1994. When adjusted for cost of living, the reimbursement would be $134 today (although this ignores the greater increase in transportation costs during this time.) The Executive Director therefore adjusted the reimbursement amount to $150 for ground transportation per trip.

When reviewing this change, staff determined that there was no clearly defined policy for adjusting travel policies such as this. It seems inappropriate for the Board to be involved in each detailed change. On the other hand, it seems appropriate for the Board to set broad travel policies as it has done in the past. With this understanding, staff will make changes to the detailed implementation of travel policies from time to time, informing the Board when this is done, but work within the broad policies set forth by the Board.

2I.2 Google and the AMS. Att. #16.

In January 2006, a member of the Society wrote to complain that we belonged to an organization of publishers that had taken a position concerning the Google-print project for libraries. He disagreed with that position. In March 2006, that same member wrote to say he was not renewing his membership, and simultaneously wrote to several members of the Board to let them know his decision. Att. #16 contains background information about this matter and explains the controversy.

2I.3 **State of the AMS.** Att. #17.

The Executive Director's annual report to the Council is attached (#17).

2I.4 **Changes in Registration Fees for Conferences, Employment Center or Short Course.** Att. #18.

Att. #18 reports the changes in these fees approved by the Executive Director since the last ECBT meeting.

2I.5 **AMS Presence at SACNAS Annual Meeting.** Att. #19.

The AMS provides $5,000 toward support of the mathematical program at the annual national meeting of the Society for Advancement of Chicanos and Native Americans in Science (SACNAS). Associate Executive Director Maycock and Public Awareness Officers Annette Emerson and Mike Breen represented the AMS at the meeting held on September 29 – October 1, 2005 in Denver, Colorado. There was also a session of the game, "Who Wants to be a Mathematician," that was very popular. Att. #19 is a report on the mathematically-related activities at this meeting.

SACNAS has shown itself to be highly effective at nurturing talented undergraduates from within their target communities to successful completion of graduate degrees in science and mathematics. AMS's continuing support for and presence at the SACNAS national meetings has enabled it to build strong ties within this community of scholars committed to excellence.

2I.6 **Report on Awards from the Epsilon Funds for the Young Scholars Programs.** Att. #20.

The Young Scholars Awards Committee, chaired by Manuel Berriozábal, evaluated nine applications for support from the Society's Epsilon Fund, in addition to the three programs funded in 2005 for two years. A total of $80,000 was available for awards for young scholars programs in the summer of 2006, the seventh year of this AMS program. A list of the programs funded for summer 2006 is attached (#20).

2I.7 **Report on AAAS Meeting.** Att. #21.

A report on the AMS-supported activities at the 2006 annual meeting of the American Association for the Advancement of Science (AAAS) is attached (#21).

2I.8 **2006-2007 AMS Centennial Fellowships.**

The AMS Centennial Fellowship Committee has announced fellowship awards granted to Christopher D. Hacon (University of Utah) and Bryna Kra (Northwestern University). Both have accepted. The amount of each fellowship award for 2006-7 will be $64,000, with an additional expense allowance of $3,250.

2I.9   AAAS-AMS Mass Media Fellowship.

  The AMS will again sponsor a Mass Media Fellow for the summer of 2006. Her name is Brie Finegold, a graduate student in mathematics at the University of California at Santa Barbara. She will work at *Scientific American* this summer.

  The Mass Media Fellowship program is organized by the American Association for the Advancement of Science (AAAS) and is intended to strengthen the connections between science and the media, to improve public understanding of science, and to sharpen the ability of the fellows to communicate complex scientific issues to non-specialists. The program is in its 32nd year and has supported nearly 500 fellows.

2I.10   Update on Fellows Program. Att. #22.

  At the January 2006 Council meeting, it was decided that the proposed AMS Fellows Program will be taken to the full membership for a vote in the fall of 2006. The program will be instituted if the number of votes to approve the program is at least 2/3 of the number of ballots cast. A slight revision of the AMS Fellows Program proposal was endorsed by the April 2006 Council meeting, and is attached (#22).

2I.11   2007 Von Neumann Symposium.

  The EC has accepted the recommendation of the Selection Committee for the Von Neumann Symposium of the proposal for the symposium *Sparse Representation and High-Dimensional Geometry*, organized by Ron De Vore (University of South Carolina), David Donoho (Stanford University), Anna Gilbert (University of Michigan), and Jared Tanner (University of Utah).

  The symposium is in the area of compressed sensing, a rapidly emerging research area at the interface of harmonic analysis, geometry of Banach spaces, statistics, algorithms and a host of important applications. It has attracted some very distinguished mathematicians and some of the strongest young researchers in harmonic analysis and discrete mathematics. The organizers have thought seriously about how to promote accessibility to the symposium and have secured funding from the Institute for Pure & Applied Mathematics to run an expository workshop aimed at preparing graduate students and participants from smaller colleges to participate fully in the symposium. The AMS Meetings Department is investigating the request of the organizing committee to hold the symposium at Snowbird in July 2007.

2I.12   NSA Conference, "Promoting Undergraduate Research in Mathematics" (PURM).

  The grant proposal for a three-day conference, *Promoting Undergraduate Research in Mathematics,* has been fully funded by the National Security Agency. John Ewing is the PI of the grant; Ellen Maycock and Joseph Gallian (University of Minnesota Duluth) are co-PIs. Gallian, who was the editor for the proceedings volume from the 1999 Conference on Summer

Undergraduate Research Programs, will be the editor for this conference's proceedings volume. The scientific program is being organized by Joseph Gallian, Aparna Higgins (University of Dayton), Ivelisse Rubio (Universidad de Puerto Rico, Humacao), and Frank Connolly (University of Notre Dame). The conference, to be held September 28-30, 2006 in Rosemont, Illinois, is designed to bring together people who have been active in promoting undergraduate research in mathematics. We expect about 90 participants. The budget of the proposal is approximately $140,000. The AMS staff will handle all of the meeting arrangements associated with the conference.

2I.13 <u>**Actions of the Agenda and Budget Committee (ABC).**</u>

At its March 17, 2006 meeting by conference call, the ABC took the following action:

The ABC set the schedule for the May 2006 ECBT meeting.

3	**BOARD OF TRUSTEES ACTION/DISCUSSION ITEMS**

3.1 **Budget Review.**

3.1.1 <u>**Discussion of Fiscal Reports.**</u>

The BT received and discussed various fiscal reports. Approval of the 2007 budget will be requested at the November 2006 ECBT meeting.

3.1.2 <u>**Capital Expenditures – 2005 and 2006 Capital Purchase Plans**</u>.

The BT received reports on the 2005 and 2006 capital purchase plans.

Capital purchases in 2005 were approximately $180,000 under the amount budgeted. The main items budgeted but not purchased were heating, ventilation, and air conditioning (HVAC) replacements in both Pawtucket and Providence (deferred until 2006 - $75,000), replacement of the meetings software (deferred until more work was completed on the computing aspects of the Infrastructure Project - $45,000), and replacement and upgrade of servers and distributed computing in Providence ($66,000).

3.1.3 <u>**Capital Expenditures - Approval of Specific Purchases.**</u>

No requests for authorization to make specific large purchases (items costing $100,000 or more) were made at this meeting.

The November 2005 BT approved the purchase of direct-to-plate equipment for the Printing Department (to a maximum amount of $120,000). This purchase was completed in the first half of 2006.

3.2   <u>**Changes in Appropriation of Spendable Income.**</u>

There are no changes in appropriated spendable income to report at this time.

3.3   <u>**Audit Committee Meeting**</u>. **Att. #28**.

Audit Committee Chair John Franks reported that the Committee met on May 19, 2006 with Chris Brathas, a representative from the auditing firm of KPMG, to hear a report on the 2005 audit and to review the audited financial statements for the years ended December 31, 2005 and 2004. Several BT and staff members attended part of the meeting, and the Committee also met privately with the auditors.

The BT approved the Audit Committee's recommendation to accept the audited financial statements for 2005 (Att. #28).

It was also reported that the Audit Committee has decided there should be a change in KPMG Manager for the audit of 2007, and a change in KPMG Partner for the audit of 2008. This is not a reflection on the performance of the current Manager and Partner, but merely a matter of principle that it is good business practice to change the KPMG personnel involved in the audit at regular intervals.

3.4   <u>**Economic Stabilization Fund Increment.**</u>

The BT was informed that, in 2005, a total of $3,100,000 was added to the supplemental portion of the Economic Stabilization Fund (ESF). A report was presented showing the current and projected status of the base portion of the ESF, and indicating that no additional funds are required for the base portion to meet its target. At this time, the Chief Financial Officer does not anticipate making any additions to the base or supplemental portions of the ESF in 2006.

3.5   <u>**Investment Committee Report.**</u>

Investment Committee Chair John Franks explained the function of the Investment Committee and reported briefly on its May 19, 2006 meeting, which was routine and did not require any action by the BT.

3.6   <u>**Short-term Investments.**</u> **Att. #24**.

The BT received the attached report (#24) summarizing the Society's cash management policies and short-term investment performance during 2005.

3.7   <u>**2007 Individual Member Dues.**</u>

The January 2006 Council approved the BT's recommendation that there be a $4 increase in individual dues rates for 2007. The rate in 2007 for Regular members in the high-income category is $156, and the high/low dues cutoff remains unchanged at $80,000.

The BT ratified the Council's decision that there be a $4 increase in the Regular high dues rate for 2007.

3.8 Acceptance of the Gift Funding the Eisenbud Prize.

The January 2006 Council approved the creation of a new AMS prize for work that brings the fields of mathematics and physics closer together, honoring Leonard Eisenbud. The Eisenbud family has given a gift of $40,000 to fund this prize, which will be awarded every three years in the amount of $5,000. The BT formally accepted the gift to establish the prize.

3.9 Trustee Reports on Divisions.

Section VI (Report on Projects and Activities) of the 2005 Operating Plan had been made available separately to BT (and EC) members, and each Trustee reported on the Division(s) with which he or she has liaison. The Trustees were favorably impressed with the activities of every division and were in agreement that things are going very smoothly.

Now that the 2005 Operating Plan is complete, a copy of it is attached to the record copies of these minutes (Att. #29).

3.10 Meeting of MR, Inc.

In 1983, when the building that currently houses Mathematical Reviews (MR) was purchased, a Michigan non-profit corporation was formed in order to obtain exemption from local property taxes in Ann Arbor and from sales and use taxes in Michigan. In order to maintain these exemptions, the corporation (MR, Inc.) must be maintained by holding an annual meeting at which the Officers and Directors of the corporation are elected.

The AMS Board of Trustees meeting was therefore temporarily adjourned, and the AMS Trustees convened as the Board of Directors of MR, Inc.

The Board of Directors of MR, Inc. elected the following officers:

President of the Corporation: Jean E. Taylor
Treasurer of the Corporation: John M. Franks
Secretary of the Corporation: Donald E. McClure
Directors of the Corporation: James G. Arthur
                               John B. Conway
                               Eric M. Friedlander
                               Linda Keen
                               Carol S. Wood

The meeting of the Board of Directors of MR, Inc. adjourned and the meeting of the AMS Board of Trustees reconvened.

| 3C | BOARD OF TRUSTEES |
| | CONSENT ITEMS |

3C.1 Procedures for the Appeals for Discounted Subscriptions.

The BT approved the continued use of the following guidelines, for 2007, which staff follow in responding to appeals for discounted subscriptions. It was noted that, over the years, this method of obtaining discounts has been used less and less. In addition to the appeals process, the Society offers a National *Mathematical Reviews* Subscription Program (described at www.ams.org/bookstore/mathsciprice#NMRSP) for institutions in the poorest countries. Institutions that do appeal are usually directed to a MathSci consortium if one is available; this is usually the best way for such institutions to meet their needs.

- Minimum price for MR Data Access Fee (DAF) of $200 applicable to institutions in countries found in the two poorest World Bank country listing. Staff can provide this level of discount even if the country does not have a national DAF.
- The discounted price for MR DAF for domestic institutions would not be lower than the greater of 40% of a list price DAF or 40% of the institution's mathematical sciences serials budget, not to exceed regular list price for a DAF.
- The discounted price for MR DAF for non-domestic institutions not included in the first category above would not be lower than 40% of a DAF. To the extent possible, information about serials budgets would also be collected, and, if desired, staff would provide information on publishing activity at the institution.
- For MR derived products, allowable prices would be regular list price for paper, 50% of list for MathSciDisc (provided SilverPlatter goes along), and lowest published price for MathSciNet.
- For other AMS journals, the lowest allowable price would be marginal cost, applicable to the most desperate cases.

3C.2 November 2005 BT Closed Executive Session Meeting.

The BT approved the minutes of the closed executive session meeting of the Board of Trustees held November 19, 2005, in Providence, Rhode Island, which had been prepared and distributed by Board Secretary Donald McClure.

3C.3 Recognition for Length of Service.

The BT approved the following resolution:

The Board of Trustees takes great pride in recognizing Donald A. Potter for twenty years of faithful service. It is through the dedication and service of its employees that the Society is able to effectively serve its members and the greater mathematical community. The Trustees offer Donald their special thanks and their best wishes.

3C.4   <u>**Resolutions for Retiree.**</u>

The BT approved the following resolution:

Be it resolved that the Trustees accept the retirement of Donald A. Potter with deep appreciation for his faithful service over a period of twenty years. The Board expresses its profound gratitude for this long record of faithful service. It is through the dedication and service of its employees that the Society is able to effectively serve its members and the greater mathematical community. The Trustees offer Donald their special thanks and heartfelt good wishes for a happy and well-deserved retirement.

3I	**BOARD OF TRUSTEES** **INFORMATION ITEMS**

3I.1   <u>**Transfer from Temporarily Restricted Net Assets to Operations.**</u>

In 2005 the long-term investment portfolio again recovered a portion of the losses suffered in 2001 and 2002. In those prior years, transfers from operations to the long-term investment portfolio were necessary in order to maintain some of the more recently created true endowment funds at their original gift amount. The total so transferred was approximately $230,800. With the positive investment performance during 2003-2005, operations has recouped approximately $213,300 of those prior years' transfers.

3I.2   <u>**Focused Planning for Infrastructure.**</u> <mark>**Att. #25**</mark>.

A report is attached (<mark>#25</mark>).

**3I.3**   <u>**Small Change in Fringe Benefits.**</u>

There has been one small change in fringe benefits offered to employees in 2006:

Effective March 1, 2006, employees may enroll in a vision insurance plan. This is a voluntary benefit and premiums are 100% employee paid. This change has no real effect on the cost of providing benefits, but enhances the Society's benefit offerings.

Respectfully submitted,

Robert J. Daverman, Secretary
Knoxville, Tennessee
July 26, 2006
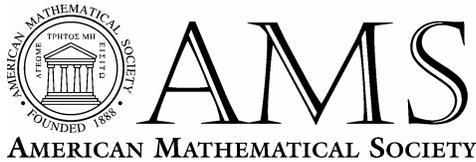
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SECRETARIAT
Business by Mail
December 1, 2005

## MINUTES
from the Ballot dated November 1, 2005

There were five votes cast by Robert Daverman, Susan Friedlander, Michel Lapidus, Matthew Miller and Lesley Sibner.

1.   Approved electing to membership the individuals named on the list dated November 20, 2005.

2.   Approved holding a Southeastern Sectional Meeting in Baton Rouge, Louisiana (LSU) on March 28-30, 2008.

3.   Approved holding a Southeastern Sectional Meeting in Huntsville, Alabama (University of Alabama, Huntsville) on October 24-26, 2008.

4.   Approved holding a Joint International Meeting between the AMS and the Polish Mathematical Society (PMS)at the University of Warsaw in Warsaw, Poland, on July 31-August 3, 2007.

5.   Approved holding a Southeastern Sectional Meeting in Murfreesboro, Tennessee, (Middle Tennessee State University) on November 3-4, 2007.

6.   Approved co-sponsorship of a meeting titled "Recent Advances in Partial Differential Equations and Applications," to honor Peter Lax and Louis Nirenberg on the occasion of their 80th birthdays, to be held in Toledo, Spain from 7 to 10 June, 2006.

        Please note that the standard procedure of having an AMS representative on the Scientific Program Committee is not realistic in this case. See the attachment enclosed. Is the meeting worthy enough for making an exception?

7.   Approved the Armenian National Academy of Science Math Institute of Yerevan, ARMENIA, as a new International Institutional member.

8.   Approved the minutes of the Secretariat Business by Mail from the ballot dated October 3, 2005.

Robert J. Daverman
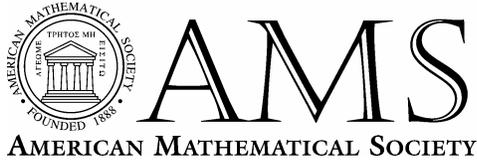
AMS
AMERICAN MATHEMATICAL SOCIETY

SECRETARIAT
**Business by Mail**
January 1, 2006

MINUTES
from the Ballot dated December 1, 2005

There were five votes cast by Robert Daverman, Susan Friedlander, Michel Lapidus, Matthew Miller and Lesley Sibner.

1.   Approved electing to membership the individuals named on the list dated November 20, 2005.

2.   Approved holding the spring Western Sectional Meeting at the Claremont McKenna College on May 3-4, 2008.

3.   Approved the minutes of the Secretariat Business by Mail from the ballot dated November 1, 2005.

Robert J. Daverman
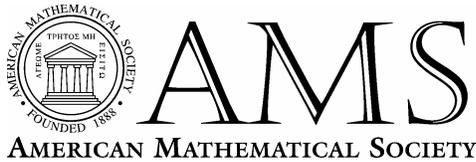
AMS
AMERICAN MATHEMATICAL SOCIETY

SECRETARIAT
**Business by Mail**
February 1, 2006

MINUTES
from the Ballot dated January 1, 2006

There were five votes cast by Robert Daverman, Susan Friedlander, Michel Lapidus, Matthew Miller and Lesley Sibner.

1.   Approved electing to membership the individuals named on the list dated December 20, 2005.

2.   Approved holding the Spring 2008 Eastern Sectional Meeting at the Courant Institute of New York University, New York, New York, on 22-23 March 2008.

3.   Approved the minutes of the Secretariat Business by Mail from the ballot dated December 1, 2005.

Robert J. Daverman
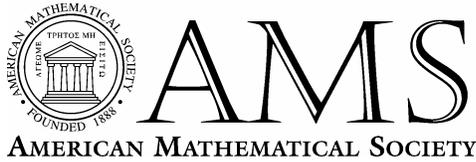
AMS
AMERICAN MATHEMATICAL SOCIETY

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SECRETARIAT
Business by Mail
March 1, 2006

MINUTES
from the Ballot dated February 1, 2006

There were five votes cast by Robert Daverman, Susan Friedlander, Michel Lapidus, Matthew Miller, and Lesley Sibner.

1. Approved electing to membership the individuals named on the list dated January 20, 2006.

2. Approved holding a Central Sectional Meeting at the University of Illinois-Urbana on 27-29 March 2009.

3. Approved changing the date of the Spring 2006 Council Meeting to 07 April 2006 (instead of 08 April 2006) beginning at 6:30 p.m. CT, in Chicago, Illinois.

4. Approved the dates of 12-15 December, 2007, for the Joint Meeting of the AMS and the NZMS (New Zealand Mathematical Society), to be held in Wellington, New Zealand.

5. Approved the minutes of the Secretariat Business by Mail from the ballot dated January 1, 2006.

Robert J. Daverman
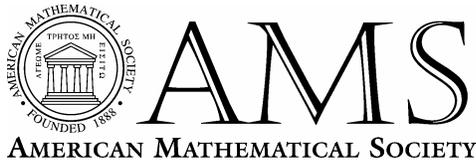
AMS
AMERICAN MATHEMATICAL SOCIETY

SECRETARIAT
Business by Mail
April 1, 2006

MINUTES
from the Ballot dated March 1, 2006

There were four votes cast by Robert Daverman, Susan Friedlander, Michel Lapidus and Matthew Miller.

1.   Approved electing to membership the individuals named on the list dated February 20, 2006.

2.   Approved an Eastern Sectional Meeting at Rutgers University-New Brunswick, Busch Campus, on 6-7 October 2007. AMS will provide $2,000 in expenses and $1,000 for coffee/refreshments.

3.   Approved institutional membership for the University of Ostrava, Ostrava, CZECH REPUBLIC.

4.   Approved institutional membership for Univ Tecnica de Lisboa, Inst Superior Tecnico, Av Rovisco, Pais, 1, 1049 Lisbon, PORTUAL.

5.   Approved institutional membership for Long Island University, Brooklyn, NY 11201.

6.   Approved the minutes of the Secretariat Business by Mail from the ballot dated February 1, 2006.

Robert Daverman

Committee on Meetings and Conferences
Highlights of March 18, 2006 Meeting

Report of the Secretariat. AMS Secretary Robert Daverman gave a report on the March 17 Secretariat meeting.

- The Secretariat reviewed International Meetings through 2009 with Shanghai at the end of 2008 as the 2009 meeting. Other meetings reviewed were New Zealand for 2007 and Brazil for 2008.
- The 2007 Erdos Lecture will be held at Davidson College in Davidson, NC, in the spring of 2007.
- The 2007 Einstein Public Lecture will be held at Rutgers University. Sir Roger Penrose will be asked to speak.
- A recommendation to eliminate "By-Title Abstracts" will be sent to the Council.
- The *Special Session on Current Events*, organized by David Eisenbud, will now be called the *Current Events Bulletin*.
- The Secretariat discussed those special sessions held at the JMM that are repeated each year, often called "endowed sessions." The Secretary asked that CoMC look at this topic for the 2007 CoMC meeting, including checking to see how many of these sessions have repeat speakers.

Report on the Subcommittee to Review the National Meeting (overall program, including Governance meetings). This subcommittee was composed of Gregory Smith (Chair), Gail Ratcliff and Joel Hass. The subcommittee reported that in their assessment, the Joint Mathematics Meetings does an excellent job fulfilling the AMS needs for national meetings. They reported on the following recommendations:

- Add a statement to the JMM web page and JMM Program stating that all participants are invited to all advertised social events.
- Continue with the Meetings Department's ongoing efforts to make the JMM Program easier for participants to find information, including making some adjustments to the JMM web page.
- Continue to support events that assist with networking such as the combined First Timers/Graduate Student Reception.
- Continue the helpful Bulletin Board that assists participants in finding roommates.

Report on the San Antonio Focus Group. Joel Hass moderated the CoMC Focus Group discussion in San Antonio. The comments and suggestions from the Focus Group were discussed during Hass's report. Some suggestions were to put a flyer in the pre-registration packet announcing the social events and receptions that are open to the public and to hold a social event in the JMM city. When asked what sessions could be eliminated, the focus group said none. They had several suggestions for the Meetings

web page and asked that the instructions on how to participate in a contributed paper session be made clearer to the reader and the young mathematician. The group also suggested that there be a way to find mentors for young mathematicians. CoMC moved that a Bulletin Board be made available at the JMM where spontaneous social events could be listed.

New Types of AMS Conferences. The CoMC subcommittee to look at topics for a new type of conference, headed by Jon McCammond, met at the JMM in San Antonio. McCammond reported on the subcommittee meeting. Ellen Maycock reported on the proposal that has been developed based on the discussion at that meeting. The program, tentatively entitled "Y Research," would provide opportunities and support for young mathematicians as they begin their research careers. Several comments and suggestions were given to Maycock for help in presenting the proposal to the Council in April 2006.

Videotaping Policy.   CoMC approved the following policy: "The videotaping of any American Mathematical Society sponsored events, including but not limited to special sessions and contributed paper sessions, short courses and colloquia, is forbidden without the explicit written permission of the Director of Meetings and Conferences for the American Mathematical Society." A permission form will be designed.

Policy on Diversity for Organizers of AMS Meetings & Conferences. A subcommittee consisting of Joel Hass, Catherine Roberts and John Ewing was appointed to write an AMS Meetings policy on diversity to include young mathematicians and underrepresented groups. This policy will be posted on the meetings web pages and on all Call for Papers.

Other informational items. CoMC's topic for annual review for 2007 is to be the review of International Meetings. Jon McCammond will chair the subcommittee to prepare a report on this topic for the next meeting.

CoMC will host a Focus Group during the New Orleans meeting on Saturday, January 6, 2007. Judy Kennedy will chair the focus group.

Ellen Maycock, Associate Executive Director
Diane Saxe, Director of Meetings
April 4, 2006

Washington Office
Report to ECBT
May 18-20, 2006

Frustration with this Administration's lack of understanding of the value of the federal investment in basic research has led to the development of several coalitions focused on innovation and making the case for a renewed federal investment in basic research. These coalitions, led by technology companies and trade associations, have taken the lead in pressing this Administration to pay more attention to the federal investment in basic research. Several White House and OMB meetings were held with CEO's of major technology companies this past fall and into this year. In these meetings, the CEO's made the case that more federal funding is needed for basic research if the U.S. is to remain technologically competitive. Several Members of Congress have also had meetings with White House officials in the same timeframe, delivering a similar message.

In the fall of 2005, Senators Lamar Alexander and Jeff Bingaman, with endorsements from Representatives Sherwood Boehlert and Bart Gordon of the House Committee on Science, worried about the U.S science and technology enterprise, asked the National Academy of Sciences to answer the following questions.

> "What are the top ten actions, in priority order, that federal policymakers could take to enhance the science and technology enterprise so that the United States can successfully compete, prosper, and be secure in the global community of the 21st century? What strategy, with several concrete steps, could be used to implement each of those actions?"

The NAS answered these questions in a report, introduced in October 2005, called *Rising Above the Gathering Storm (*http://darwin.nap.edu/books/0309100399/html/1.html*)*. This report garnered much attention in Washington and a National Innovation Summit stimulated by the report and by the Council on Competitiveness report, *Innovate America: Thriving in a World of Challenge and Change* was held in Washington, in December, 2005. This summit brought in an array of people, administration officials, CEO's, and college presidents.

The Washington Office helped organize a letter writing campaign to the White House promoting the actions suggested in *Rising Above the Gathering Storm* AMS president, Jim Arthur wrote such a letter to Andrew Card, then Chief of Staff for the White House and a proponent of the report.

This advocacy by business leaders, Members of Congress and others, paid off, as the American Competitiveness Initiative (ACI) was introduced as a major initiative in the FY 2007 Administration Budget Request presented on February 6. A centerpiece of ACI is a commitment to double investment over ten years in key federal agencies that support basic research programs in the physical sciences and engineering. The agencies singled

out for investment are the NSF, the Office of Science of the Department of Energy, and the core programs of the National Institutes of Standards and Technology. In the Budget Request the NSF is allocated an FY 2007 budget of $6.02 billion, a 7.9 percent increase, and the Office of Science a 14 percent increase to a FY 2007 budget of $4.1 billion.

In the Congress, the Senate has taken the lead in introducing legislation addressing the nation's ability to remain competitive. Senators Ensign and Lieberman have introduced the National Innovation Act of 2005 and Senators Alexander, Domenici, Bingaman and Mikulski have introduced Protecting America's Competitive Edge Through Education and Research Act of 2006.

The House has not presented a bill that can be taken seriously. Congressman Bart Gordon, minority leader of the House Committee on Science, introduced a bill, however, it will not go anywhere unless he can get Republicans on board, and this is not likely to happen. Another Republican, Bob Goodlatte, introduced a bill focused on innovation but his bill is centered on tax credits for industry. We expect House Committee on Science Chair, Sherwood Boehlert, to introduce a bill concerning innovation and competitiveness sometime in May.

All of these bills are authorization bills, but their passing could send a message to the appropriators that new investment is needed in the U.S. research enterprise. The ACI is the first sign that this President realizes that we must invest in basic science. The 7.9 percent increase for the NSF is the highest increase that this administration has proposed for the NSF since coming to office. However, due to the many pressures on the federal budget, it is not a sure thing that the NSF will be granted such an increase.

Appropriations committees will be feeling a lot of pressure from many constituent groups as well as pressure to keep the federal budget under control. In the House and Senate appropriations subcommittees that oversee the NSF, there will be much pressure to add money to agencies such as NASA, NOAA, NIST, and the FBI, all under the committees' jurisdiction.

Indirectly, funding for the NIH could affect how much money is allotted to the NSF committees. The NIH received no increase in the President's budget, however the NIH has a strong constituent base and many friends in the Congress. Even though the NIH is not in the same appropriations subcommittee as the NSF there is an amount of money allotted for overall discretionary spending, so when the discretionary budgets are established for each subcommittee, more money going to the NIH subcommittee could take money from the NSF subcommittee. Negotiations within the NSF subcommittees could be intense as the Members vie for funding for their favorite agencies.

Our focus now is on Congress, especially appropriators. We will collaborate with the Washington representatives of other Coalition for National Science Funding (CNSF) organizations, making Hill visits on behalf of the NSF this spring. We have already supported, by communicating with Member offices, getting Members signatures on an

NSF Dear Colleague letter orchestrated by Congressmen Vernon Ehlers and Rush Holt. This letter signed by over 160 Members was sent to Frank Wolf and Alan Mollohan, chair and minority leader respectively, of the House Science, State, Justice and Commerce and Related Agencies appropriations subcommittee. The letter asked for a budget of at least $6.02 billon for the NSF.

On April 26, as part of the Committee on Science Policy meeting, CSP members and invited department chairs will be spending the day making Hill visits on behalf of mathematics, the NSF, and the Division of Mathematical Sciences (DMS) of the NSF. Our message will be that mathematics is critical to innovation and competitiveness, that the discipline is fundamental to progress in science and engineering and many other areas, and for these reasons the mathematical sciences need adequate federal support in future budgets. Since the NSF accounts for nearly 80 percent of the federal support for mathematical research in academic institutions, the DMS budget should receive increases in future NSF budgets that adequately reflect the contribution of the discipline.

At the Joint Meetings, the Washington Office again organized the Department Chairs Workshop. Thirty-three chairs participated in the workshop, our largest group ever. Krishnaswami Alladi, University of Florida, Deanna Cavney, College of Charleston, David Manderscheid, University of Iowa, and Peter March, The Ohio State University were the leaders of the workshop.

Also at the meeting, the Committee on Education had a panel session titled "International Perspectives on Undergraduate Mathematics." Sam Rankin helped organized an AMS-MAA-MER special session, "Mentoring and Nurturing Students in Mathematics Departments." He also gave a presentation during the session.

In March Sam Rankin wrote his annual contribution to the AAAS Annual R&D Report. This report outlines funding for Science and Technology as projected by the Budget Request.

On May 5, the AMS Washington Office will host a breakfast for high school teachers who have been selected for a Presidential Award for Excellence in Mathematics Teaching. There is one high school teacher from each state. Other mathematics professional societies will also be invited to the breakfast.

The Washington Office is again running the annual CNSF Exhibition. Anita Benjamin is serving as director of the Exhibition, which will take place in Rayburn House Office Building, on June 7. As usual, a full capacity of exhibitors will participate, representing all areas of science and engineering. The AMS will sponsor an exhibit.

Samuel M. Rankin, III
Associate Executive Director
April 2006

REPORT ON THE BOOK PROGRAM

Over 87,000 books were sold by the AMS in 2005, including sale of service publications, contributing over $3,351,000 in revenue. Eighty-nine books were published by the AMS in 2005, including two sale of service projects published in the *Contemporary Mathematics* series, and a second edition published in the *Student Mathematical Library* series. The mix of books comprised forty-six new monographs of which five were nonseries publications. Eighteen of the books published in 2005 were published under co-publishing agreements that we currently have in place with eight organizations. The total number of books published was well under the budget. The acquisitions editors are working to increase the number of books in various stages of development so that we can meet budget more consistently in the future.
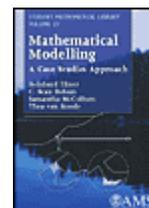
Approximately 68 % of 2005 book sales were through commercial distribution channels. Key accounts in this group include Oxford University Press, Maruzen, Amazon, Blackwell, and Yankee Book. While Oxford sales dipped slightly and Blackwell and Maruzen sales remained stable, Yankee and Amazon sales increased, with Amazon sales doubling over the prior period.

Direct sales to individuals accounted for approximately 30 % of total book sales in 2005. Over $823,000 of those sales were to AMS members. Sales through the individual sales channel declined by 12 % between 2004 and 2005. We theorize that most of those sales went to Amazon.
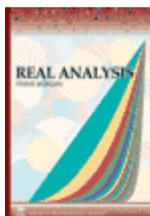
Notable books published in 2005 included the following nonseries publications: *Real Analysis* and *Real Analysis and Applications* by Frank Morgan; *Change Is Possible: Stories of Women and Minorities in Mathematics* by Patricia Clark Kenschaft; and *The Wild World of 4-Manifolds* by Alexandru Scorpan.

New in-series publications include: *Probability Theory in Finance* by Sean Dineen; *Conformally Invariant Processes in the Plane* by Gregory F. Lawler; *Mathematical Modelling: A case studies approach* by Illner, Bohun, McCollum and van Roode; and *The Mathematics of Voting and Elections: A Hands-On Approach* by Jonathan K. Hodge.

During 2005, Sales Administration continued its review of exclusive distribution and sales representation contracts. We continue to refine our strategy for market expansion in several geographic regions, in particular China and India. In 2005, we replaced a co-exclusive book distributor in India, and negotiated new agreements with several booksellers in China. Of these areas, China is demonstrating the most growth with unit sales doubling between 2004 and 2005. The 2006 sales are on pace for significant growth.

Sales of AMS publications through the online retail channel continued to increase significantly during 2005. Sales to the online retailer Amazon increased approximately 39% over prior year sales. Our decision to join the Amazon advantage program, which provides for 24 hour shipment of AMS books, and the "Search Inside the Book" (SITB) program have contributed to the overall growth of sales with Amazon.

We recognize that book buyers expect online retailers to provide a similar book buying experience in the online bookstore as is available in the brick and mortar stores. Consumers of our books are interested in previewing a publication prior to making a purchasing decision. In response, we have provided a previewing service on the AMS Bookstore where chapter excerpts, table of contents, and other supplementary materials are available for review. We are also working with an external vendor to provide online access to chapter excerpts of our books to more than 12,000 government owned bookstores in China at no cost to the AMS.

Other changes have been made to the AMS Bookstore to provide a cleaner look to the main bookstore pages. This new layout of the home page allows display of more featured publications. With the ability to showcase more titles, we are not only featuring new publications, but also publications of related interest, regardless of publication date. We have seen evidence that sales of older publications increase when featured in this format and have helped bookstore sales in 2005. We are hopeful that these modifications will result in improving sales from our bookstore since sales have reached a plateau of late.

To date the AMS has not been widely recognized as a mathematics textbook publisher, although we have a considerable number of publications that meet the criteria for course adoption. We have taken many steps in the past year to improve our market share in this area. New criteria have been established for identifying which AMS books qualify as textbooks for classroom use. Our entire list of books in print has been evaluated against this criteria and a firm list of textbooks has been created. We have contracted the services of a research firm that provides mathematics departments with a thorough source of market research information to use in selecting textbooks. At the same time, a targeted promotional campaign showcasing our textbook program was launched which was directed at mathematics departments. We will measure the success of these initiatives over the next eighteen months.

Several catalogs and direct mailing campaigns promoting our publishing program are undertaken each year. This past year a new group which includes representatives from Public Awareness, Membership, Promotions, and Sales was formed to work on cooperative ventures promoting all aspects of the Society. Examples of this collaboration include new cross area promotional advertising, exhibiting, and communications with members.

Beth Huber, Deputy Publisher
4/06

Carnegie Initiative on the Doctorate
Renewal of Doctoral Education in Mathematics: A proposed AMS program

Presented to the AMS Committee on the Profession, 24 September 2005
Peter March, John Meakin and David R. Morrison

The Carnegie Initiative on the Doctorate (CID) is drawing to a close. But its twin goals, namely to think deeply about the purpose of doctoral education and to act purposefully to improve doctoral programs, remain vital concerns of the national mathematics community. The CID asks, "What is the purpose of doctoral education?" and proposes the answer, "to prepare stewards of the discipline". Guided by the notion of stewardship, the mechanisms developed by the CID in its annual convenings led a representative group of departments to a deeper exploration of the programmatic and human resources issues in doctoral education than would otherwise have been the case for each department in isolation. We feel strongly that this experience was beneficial to our graduate programs and that the CID experience should be widely shared.

We propose that the AMS sponsor a program designed to help departments in the mathematical sciences sustain the work begun by the CID. The program would adapt those aspects of the CID that were essential to its effectiveness: (a) a competitive application process; (b) annual workshops consisting of facilitated discussion and exploration of specific aspects of the graduate program, its explicit and implicit goals, the extent to which those goals are attainable by the program as it currently exists, appropriate improvements to the program, and mechanisms to assess the impact of the program; (c) deliberate and meaningful engagement of graduate students in the process; (d) an atmosphere of honesty, transparency and friendly criticism; and (e) periodic follow-up during the year. The precise format of the process will have to be clearly formulated, as will the structure of the workshops, but we can expect help from the relevant Carnegie Foundation senior scholars as well as faculty and students of the current CID departments.

A department wishing to participate will submit a proposal outlining the current state of doctoral education in their department and directions for possible change. The department will commit to sending a small team of faculty and graduate students to workshops for the program during three consecutive summers. A new iteration of the AMS program will begin every second year, and during the third summer a departmental team will help lead newer departments in the program as well as assessing the change in their own department. Departments that have been through the CID program or previous iterations of the AMS program will be asked to help lead a subsequent iteration of the AMS program.

It is not clear to us what the magnitude of funds required would be for such a program, but if the AMS chooses to seek external funding to sustain this program, we would be happy to assist in this process.

Because the workshops will be small, on the order of 5-8 departments and 20-30 individuals, not every qualified department that applies can be accepted during the first round. Departments will be invited to resubmit their applications in subsequent rounds.

Y Research

a program for young research mathematicians

Young mathematicians are often overwhelmed when beginning their research careers. Many receive little guidance about initiating their research programs, either before or after receiving their doctorates. Many end up in positions at colleges or universities where research is not a top priority. Many are isolated from other active researchers in their own fields or from any researchers at all. Programs exist at individual institutions and at the national level to assist young mathematicians with teaching and juggling the many demands on their time. But there is no national program that initiates them into a research community, guiding them as they begin life as research mathematicians and form working relationships with other researchers. This is a proposal for the AMS to create such a program.

The proposal combines some of the best traditions of mathematical research -- Summer Research Conferences and special sessions at the winter meeting -- with careful mentoring and a support network. The aim is to give "peridoctoral" mathematicians a head-start on their research careers, and then to help them sustain research as their research programs mature.

The four components
Each annual cycle begins by choosing a small number of relatively broad research areas (most likely four per year). Young mathematicians (defined as those who have recently received their doctorate or perhaps about to receive it) apply to enter the program with support from their departments. There are four key elements of the program.

- Week-long conferences in the summer of year n
    A key feature of this new program will be week-long conferences, with each including two research areas (not necessarily related). The large majority of the participants will be young researchers—mathematicians who have received their doctorates within the past 2-3 years and advanced graduate students. A small collection of senior research mathematicians will give expository talks, but most of the talks will be given by the young mathematicians. There will be concurrent sessions in each specialty as well as sessions for the whole group. The joint sessions may cover mathematics of interest to both groups, but they also will cover general issues of interest to research mathematicians -- grants, refereeing, journals, and reviewing. The conference will be organized by the senior mathematicians, and other senior mathematicians in addition to the organizers will attend.

- Special sessions at the Joint Mathematics Meeting in January $n+1$
    Each research area will have a 4-hour special session planned for the JMM, which all participants must attend. Departments make a commitment to provide travel support to attend the JMM as part of the acceptance process. The senior organizers of each group will apply for a special session in the spring of year n. The organizers and speakers of the

special session will be identified from among the young researchers at the summer conference. Names of speakers for the session will thus be available by the end of September in year n. Young mathematicians will benefit in many ways from attending the JMM—renewing ties with the other young researchers from the summer conference and gaining a larger view of the mathematics community.

- Mentoring programs in years n through $n+2$
  Every young mathematician in the program will be assigned a mentor who is an active mathematician in the same research area. The assignment does not have to be one-to-one; each interested senior mathematician may mentor several young researchers. The senior mentor will not work at the same institution as the young mathematician. It is hoped that mentors will continue their roles beyond the three-year period and that, as the program cycles through several generations of young researchers, "graduates" of the program will serve as mentors.

- Discussion networks
  The AMS will set up a private discussion board for each research specialty, to allow open conversations

Some issues

A small group of active senior mathematicians will oversee the program for each research area. They organize the summer conference (and invite additional senior people), make arrangements for the special session, enlist mentors in the specific research area, and monitor the private discussion board. That's a great deal of work, and it's likely these people will need some compensation.

The entire program will need an advisory board, which likely should be small and highly involved. The AMS staff will provide support. The Meetings and Conferences Department will handle the logistics of the summer conferences and special sessions. The executive staff member assigned to the overall program will be the Associate Executive Director for Meetings and Professional Services.

How many participants should be in each research area? Roughly twenty seems to be about right. How many senior mathematicians? Too few will place an extra burden on these people; too many, however, will add extra complexity. Around three seems to be the right number. If there are four research specialties each year, about 80 young mathematicians will enter the program each year.

There will be substantial costs for this program. The Society will apply for funding from the National Science Foundation, arguing that such a program is an excellent investment in mathematical research. It is in fact a bargain as well. For an annual amount far less than a typical VIGRE grant, this program will nurture the research careers of far more young mathematicians than are in any single department. Over time, it could touch nearly all areas of mathematics and prepare a future generation of researchers.

What's the goal of such a program? It's not merely running some additional workshops in the summer or special sessions at the JMM, and it's more than giving young mathematicians good advice about how to apply for grants or juggle their careers. Over the long run, this program will create cohorts of young mathematicians in specific areas of mathematics that, one hopes, will sustain themselves over many years, fostering joint research and coherent research programs. Four new cohorts each year will make a profound difference for mathematics. Decades of interaction with the colleagues one meets in such a program will make an even greater difference to these young mathematicians.

John Ewing, Executive Director
Ellen Maycock, Associate Executive Director
April 13, 2006

Report from David Weinreich
AMS Congressional Fellow 2005-06

As the AMS Congressional Fellow this year, I have had the opportunity to work on a wide range of issues, from energy and environmental policy to foreign affairs and trade, as a legislative assistant to Congressman Rob Andrews of New Jersey. For me, it has been an incredible process, the best civics lesson I could have ever imagined, and a chance to go behind the scenes to the sausage making that is the legislative process. I've been privy to meetings with high level officials and leading thinkers on the pressing issues of public policy, and gotten to get my hands dirty drafting legislation and writing oversight letters to government agencies.

But I am a mathematician, and how does a mathematician end up in a Congressional office doing such things, and why? Although there isn't a great deal of mathematics or mathematics-related policy happening on the Hill (as Congress is referred to by insiders), I believe that my background has been of great service to the Congressman and to policy making. Certainly my analytical skills are useful to review legislation and government activities, ferreting out the truth in conflicting claims. I could pick any of over 100 different issues I'm working on to illustrate it, but in each there are aspects of my training that come to bear. A high priority in my office is the issue of nuclear nonproliferation. In writing and analysis, I have applied my understanding of games in social networks from my background in combinatorics to the geopolitical situation, my understanding of the scientific community in trying to look at solutions to the proliferation of nuclear scientists, and my analytical and quantitative skills in trying to understand the technical aspects of the latest developments in Iran's nuclear program. I have also been able to speak to researchers in both the scientific and political realm at a different level than some of my colleagues who are just out of college. The increased knowledge that comes from this process enhances the Congressman's decision-making process.

Further, my background means that science receives a stronger focus in my office. With so many pressing issues before Congress every day, personal interest is a powerful sifter of information and priorities. Together with the fellow who came before me, I have brought science funding and the issue of scientific rigor in decision-making to the attention of the Congressman more often than occurred in the past, which means that he is involved in more scientific initiatives than he might otherwise be.

"Laws are like sausages – you don't want to see either getting made," is a statement attributed to Otto Von Bismarck, but I've relished the experience of getting insight into the process. Moreover, while there may be some truth to the difficult give-and-take that goes into the making of laws, I've been amazed at how reasonable the process can be. Finally, I'm most impressed by how responsive Mr. Andrews is to his constituents. I've learned that one letter from a constituent can convince him to take action, even lead to the drafting of legislation. This is perhaps the best lesson I can take back to the AMS – we, as individuals and as a community, must be active in contacting our representatives to tell them what is important to us; it will make a difference.

April 2006

Star Wars Redux

A letter was recently circulated in the mathematics community and it was been signed by over 50 mathematicians. It calls for the AMS to abide by the "Star Wars" resolutions of 1988, which were passed following a particularly contentious Business Meeting of the Society. It also suggests implicitly that the Society's staff has not followed the policies of those resolutions. (The accusation is implicit because it merely points out that the staff has not proven that they have implemented the policies.)

Chandler Davis is one of the signatories of the letter, and he has communicated with Jim Arthur on several occasions. The communication did not calm Chandler, and the letter has now been submitted to the *Notices*. It was recently accepted and will appear in the June/July issue.

The letter reads as follows.

This is an open letter to the AMS leadership.

We are extremely concerned that the Society not facilitate funding from the Department of Homeland Security to mathematicians. Many of their projects are based on dubious fear-based hypotheses, and some others are geared towards clear violations of personal freedoms.

The Society has no mandate for such activities. On the contrary, the membership voted in a referendum in 1988 on two motions calling on the Society to reduce the profession's dependence on military funding. The turnout was large, and the motions passed by healthy margins. The staff of the Society has never reported to the officers and members on their implementation of this policy, and indeed in recent years it seems to be no longer recognized. It was, however, never repealed, nor should it be.

We urge that military funding be avoided by mathematicians. The reasons are at least as strong now as in 1988: the so-called Anti-Missile Defense has been revealed ever more plainly as incapable of defending anything, and the country's military adventures are ever more flagrantly destructive. We also urge that the profession avoid funding from the Department of Homeland Security, which since its creation has been conspicuously bumbling. It is not defending national security but only spreading alarm and insecurity in the minds of the public.

We urge that the Society's staff and officers never facilitate contacts of mathematicians with military funders nor with the Department of Homeland Security.

In addition to the names below, this letter has also been signed by 49 other mathematicians. A complete list may be found at

http://www.math.temple.edu/szyld/AMS_Letter.

Chandler Davis, University of Toronto
Mary W. Gray, American University
Henry Helson, University of California Berkeley
Michael Shub, University of Toronto

There were five motions proposed at the 1988 Business Meeting of the Society, and they were all passed in a subsequent mail ballot by the membership. More than 7,000 members voted, and the motions were each approved by wide margins (57%, 74%, 89%, 90%, and 88% respectively). Here are the precise motions.

Motion 1'. Many scientists consider SDI (commonly referred to as Star Wars) incapable of achieving its stated goals and dangerously destabilizing. Participation by universities and professional organizations lends a spurious scientific legitimacy to it. Therefore, the AMS will lend no support to the Star Wars program. In particular, persons representing the AMS shall make no efforts to obtain funding for Star Wars research or to mediate between agencies granting Star Wars funds and people seeking these funds.

Motion 2'. The AMS is concerned about the large proportion of military funding of mathematics research. There is a tendency to distribute this support through narrowly focused (mission oriented) programs and to circumvent peer review procedures. This situation may skew and ultimately injure mathematics in the United States. Therefore those representing the AMS are requested to direct their efforts towards increasing the fraction of non-military funding for mathematics research, as well as towards increasing total research support.

Motion 3'. Most seminal research in mathematics comes from individuals and small informal collaborations, not from large teams. The seriously low level of Federal funding for individual investigators documented in the 1984 David Report has recovered only slightly, and many of our best mathematicians are currently unable to find funding for research. Therefore, we urge that the Federal funding agencies not allow the recent trend toward large teams and big projects to compromise the strength through diversity of mathematics. We urge that in their continued attempts to bring mathematics funding into balance with that for related fields these agencies make every effort to increase the numbers of individual investigators to the levels recommended in the David Report.

Motion 4'. Many advances in science and technology come from fundamental mathematics which has been developed without applications in mind. In recognition, we urge agencies which fund research in mathematics to also fund a balanced proportion of basic research.

Motion 5'. We urge funding agencies in the mathematical sciences to solicit proposals openly and broadly and to assure that reviews of scientific merit are conducted by a diversified group of expert scientists.

Only the first two of these pertain to the Society, and I can briefly report on each.

- The first motion calls for the AMS not to lend support to SDI, and specifies that no representatives of the AMS shall seek funds or help others to seek funds from agencies representing SDI. Because this was nearly 20 years ago, I cannot guarantee that this was faithfully carried out, but I know of no instance in which representatives of the AMS violated this motion. Mathematicians played little role in SDI, and the AMS never was involved.

- The second motion calls for the Society to work for increased support from non-military agencies and to increase funding more generally. In fact, this has happened -- support for mathematics has shifted dramatically. Today nearly 80% of federal support for mathematics research comes from a single agency, the

National Science Foundation. Even the modest remaining support from military agencies tends to be highly directed and not available to general mathematicians. For this reason, the AMS works tirelessly to promote the interests of the National Science Foundation, making some additional effort to include other sources of funding such as the Department of Energy and (more recently) the National Institutes of Health. The AMS also promotes the importance of individual investigator grants and peer review. And, of course, we have worked hard for increased funding of mathematics in general.

It seems evident that the Society adhered to both these motions, at least literally interpreted.

If the signatories of the letter interpret these motions more broadly, however, this *is* a problem. We cannot prohibit contact between the AMS staff or leadership and all security-related agencies without making us (and mathematicians more generally) look foolish. We cannot prohibit mathematicians from giving talks on the contributions of mathematics to security without violating people's rights. And we cannot exclude all representatives of security agencies from our meetings without isolating mathematics from the rest of science.

The Society's staff never engages in "mediating" between mathematicians and funding agencies -- that's not what we do in Washington. But the AMS *does* try to influence policy in the interest of mathematics. Engaging in dialogue is the only way to do this.

John Ewing

Google and the AMS

Google is a big company, worth more than $90 billion and doing many innovative things. One of those things is "Google-print", which has affected the AMS in two ways. I have previously reported to the Board about one of those (putting our books online). This report concerns the other.

Google-print is really two projects, which I'll refer to as "Google-print for publishers" and "Google-print for libraries".

Google-print for publishers is a cooperative effort begun in 2003 with publishers to promote printed literature through the Internet. Publishers sign an agreement with Google to scan entire books and make them searchable online. When a Google search finds a term in the book, the user can see only three pages of the book, but has an opportunity to order the book. Publishers have some control over the ordering links, and publishers also receive a (very) small fraction of the advertising revenue from these pages.

I have described this to the ECBT previously. This is the kind of program that represents the best kind of cooperation on the Internet -- everyone gains because users find books more easily, publishers sell them more efficiently, and Google makes money (lots of it) selling ads. When the program was announced, the AMS was one of the first publishers to sign up, even when others were fussing about possible misuse. (Some publishers worried that fanatical cheapskates might find ways to download the entire book.) We sent Google our entire backlist of more than 3,000 titles, and we continue to send them all new publications. The arrangement is publisher-friendly, allowing publishers to remove books from the program at any time in case they change their mind.

Google-print for libraries is different, at least from the publisher's point of view. It is a cooperative effort between Google and a small number of major libraries. Each library signs an agreement with Google to scan its entire collection. The material is then made available for searching in the usual way. When a Google search finds a term in a book that is in the public domain, the entire book is made available online. When the search leads to copyrighted material, the user (at least outside the particular library community) sees only three pages, just like Google-print for publishers.

Even with this restriction, the program has made many publishers uneasy. Like Google-print for publishers, this program makes it easier to find printed material. Unlike its sister program, however, Google-print for libraries is not an agreement with *publishers* but with *libraries*. Publishers argue that creating copies of copyrighted books without a written agreement is illegal. Google retorts that it has a right to copy such material under the doctrine of "fair use", which is well known in American copyright law, especially in the scholarly community. (Google has since relented, saying that publishers who do *not* want their books copied can file paperwork, book by book, to make that assertion. Publishers point out this is impractical.)

In 2004, a group of five large publishers and the Authors Guild brought suit against Google. Many legal scholars believe the outcome is a tossup, although some also point out that the courts have consistently ruled in favor of copyright owners in recent years. Google argues that not only is this fair use, but it's also clearly a *good* thing to do -- for readers, authors, and publishers themselves. The publishers reply that Google is a commercial enterprise, not a charitable organization, and the reason it is appropriating copyrighted material is to make money, not to do good works. One central concern of the publishers is that without a written agreement it will be difficult to bring legal action in the event the scanned images are misused in the future.

How is the AMS involved in this? We're not, at least not directly. But we *do* belong to two organizations that have taken a stand on the issue. The AMS is a member of the Association of American Publishers (AAP), which has come out strongly in favor of the publishers' position. The AMS is also a member of the Association of Learned and Professional Society Publishers (ALPSP). ALPSP is based in the United Kingdom, and as the name indicates it represents many society publishers around the world, with an emphasis on *small* publishers. It is generally progressive, for example, promoting a wide variety of views on things such as open access. In 2004, the chief executive of ALPSP wrote a position paper on the Google controversy, supporting the publisher position.

In January 2006, one of our members, Peter Doyle, wrote to me about Google-print. He had read a news item about the ALPSP position, noted that the AMS was a member of ALPSP, and asserted that the AMS should not be affiliated with an organization that was so obviously working against the interests of the scholarly community. We corresponded at length. I pointed out that the case was not nearly as clear as he thought and that, while the AMS had no position on this matter, it was better to be part of a conversation by joining publisher organizations than to isolate ourselves by resigning from them. We finished our correspondence amicably (we've had discussions on copyright issues before).

In March 2006, Peter sent a note to the Membership Department, saying that he was not renewing his membership because the AMS supported ALPSP. At the same time, he wrote to several members of the Board reiterating this fact and stating his reason.

There is nothing to be done here. I am writing merely to keep the Board informed. Occasionally, members disagree with a stance taken by the Society and will not renew (or resign from) membership. In the present case, Peter has not renewed because he disagrees not with our stance but with the stance of an organization to which we belong. Of course, we cannot make decisions based solely on the opinions of individual members on a particular issue. (We rejoined AAP, incidentally, because it took a strong stance on the issue of the embargo, with which most of our members would agree.) We can and should make decisions based on the collective opinions of members, along with the principle that the Society should act in the best interests of mathematics. I believe we have done so in this case.

John Ewing

ALPSP position statement on Google Print for Libraries

ALPSP is the international association for not-for-profit publishers and those who work with them in the scholarly information chain. Between them, ALPSP members publish some 8-9000 journals and many thousands of books, as well as databases and other products.

We recognise the great benefits which can accrue to publishers through the increased visibility gained from inclusion in Google's search index. With Google's help, we have provided instructions to our members on how to enable Google to index their access-protected content; those who have done so are pleased with the increased number of hits.

A number of our member publishers also participate in the Google Print for Publishers program – which allows them to opt-in, and to specify what content may or may not be freely displayed and what links should be supplied to enable users to purchase the publication. These publishers have been pleased with the increased hits although, as far as we are aware, actual sales have not increased dramatically.

Google Print for Libraries is a very different matter. We firmly believe that, in cases where the works digitised are still in copyright, the law does not permit making a complete digital copy for such purposes.   We are willing to work with Google to find a mutually acceptable way forward; however, we do not consider Google's proposal to stop the digitisation program until 1 November, up to which date publishers may exclude their works by supplying full bibliographic details including ISBN/ISSN (a major undertaking), to offer an acceptable solution. We believe that publishers and, where appropriate, other rightsholders (such as authors and artists) must be asked for permission before an in-copyright work may be digitised and included in this program. We recognise that this is complicated as there are many thousands of publishers in the world; however, collective licensing agencies (such as CCC in the USA and CLA/PLS in the UK) may be able to perform a useful role in simplifying the process of obtaining permissions.

We wish to continue to discuss an 'opt-in' solution; in the meantime, however, we shall be advising our members that if they are not sure about the program, they should exclude all their works for the time being. We shall also be recommending (as suggested by Google) that they can protect both in- and out-of-copyright print and electronic works by placing them in the Google Print for Publishers program instead. We call on Google to hold an urgent meeting with representatives of all major publishing organisations, in order to work out an acceptable and practical way forward.

Sally Morris Chief Executive, ALPSP 24 August 2005

State of AMS 2006

My annual report to the Council each
year views the Society from a particular
perspective, focusing on a special
program or merely concentrating on a
particular aspect. This year, I'd like to
view the AMS in the simplest possible
way—as an organization that makes
money and spends it.

This can be misleading, of course.
Societies are not merely businesses and
their success cannot (and should not!) be
measured by their revenue alone. But
understanding the ways in which an organization derives its revenue, as well as the ways it
spends it, allows one to understand the organization's values and goals.

I'll organize my report into three parts—the money we make, the money we spend, and the
money we save.

AMS Membership (2005)

The Money We Make

When members think of the Society's revenue, the first thing they think about is dues. That's
natural because members are always aware that they pay dues. Individual dues, however, make
up less than 6% of the Society's revenue each year. Institutional dues make up another 3.5%, but
the total is still very small (and institutional dues are less than the subscription discounts given to
member institutions). Dues are an important source of revenue, but not a large one.
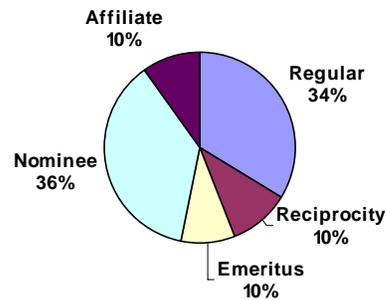
AMS Operating Revenue (2005)
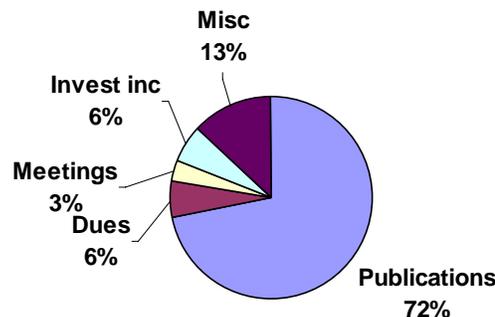
Members will also think about revenue from the Society's meetings, for which the AMS charges registration fees. But revenue from meetings amounts to less than 3.5% of the total. In fact, we deliberately keep meetings revenue low because of the long-standing philosophy of the Society *not* to make money on meetings.

The major portion of our revenue (72%) comes from publishing—books, journals, and *Mathematical Reviews*.

- The book program (13% of revenue) competes well with programs of other well-known publishers of high-level mathematics. The number of new titles published was slightly higher in 2005 (89), and so were the actual number of books sold. Revenue was slightly down. We work hard to keep our prices low, which helps to keep prices of other publishers lower as well. We make a commitment to keep *every* monograph in print (we have a new print-on-demand program), and we now show more than 3,000 titles in print.

- Journals (18% of revenue) have played a key role in publications of the AMS from its founding. The Society publishes 12 in all, including translation and e-only journals. While there had been slow attrition in subscriptions for many years, in the past several we have seen that trend reverse, and the number of subscriptions has actually risen slightly. As we do for books, We have tried to keep journal prices low. As a consequence, the fraction of the Society's revenue from journals has steadily decreased, from 24% in 2000 to 18% last year. Journals remain an essential part of our scholarly heritage, however.
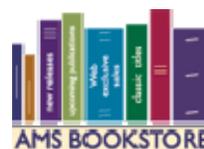
- *Mathematical Reviews* (nearly 39% of revenue) is really many products rather than one. The essential part consists of several databases—one made up of nearly two million items, one of all authors (uniquely identified for each item), one of all journals, and a new one of more than a million references, providing citation data that gives new insight into the mathematical literature. These have been painstakingly assembled over the past 65 years. The data is offered in several formats, although the most popular (and by far the most used) is MathSciNet. For more than ten years the Society has charged for access to Math Reviews using a novel model: Institutions pay a "data access fee" (DAF), which is their contribution to assembling the database, and then pay a separate fee for access to each particular product. The DAF is the largest portion of the cost (in 2006, $7,320 list and $5,856 for institutional members). By grouping institutions into consortia, we allow subscribers to share the cost of the DAF. This scheme has had some important consequences for the AMS: the number of institutions with access to Math

Reviews has more than doubled over the past ten years, and revenue from the DAF and products has risen steadily, while the "average" cost of access per institution has dropped dramatically.

A member recently wrote to me arguing that the Society should divest itself of its publishing activities because he claimed they represent a conflict of interest: The AMS depends on publishing revenue for its existence, and hence cannot take the necessary steps to change the way scholarly books and journals are published. I argue the opposite is true: *Because* we depend so much on publishing for our revenue, we *must* take steps to change scholarly publishing. And by being a major publisher, the AMS has influenced the publishing of mathematics in many ways— lower prices, forward-thinking policies, and higher quality. Publishing is far more than making money for the AMS ... but making money is important.

There are a number of additional sources of revenue (contributions, advertising, sale of service, short-term investments, etc.), but each is relatively modest when compared to our publications revenue. Our total revenue for 2005 was a little more than twenty-three million dollars.

The Money We Spend

It is likely not surprising that *most* of the money the AMS spends each year goes to the publication program—it is a large enterprise involving most of the 210 staff of the Society. Mathematical Reviews alone has more than 70 people working in our Ann Arbor office. We maintain our own warehouse and printing plant; we engage in marketing and promotion for journals and books; we engage in regular development cycles to update our publications website. Publishing is our largest expense category by a wide margin.

We also spend a lot of money on our meetings, which include the Joint Meeting each January (about 5,000 people), eight sectional meetings, one joint international meeting, and various workshops and conferences. As previously mentioned, the AMS tries to balance revenues and direct expenses for meetings as closely as possible. We have been successful in doing this.

Join Us out West for the
Joint Mathematics Meetings
San Antonio, Texas
Henry B. Gonzalez Convention Center
January 12 - 15, 2006
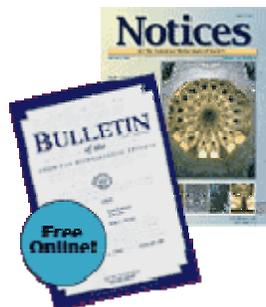
Most scientific societies would divide their other expenses into two categories, those directed at members and those directed at the scientific community as a whole. That division is hard to accomplish for the AMS, because we often blur the lines between member service and professional outreach. For example, our two member journals, the *Bulletin* and *Notices*, are major member benefits, but both journals are freely accessible to *all* mathematicians online. The AMS website has become a central way to communicate information to members, but almost all the

information is made available to all mathematicians at no cost (to them). Employment services are accessible to everyone (because restricting them to members, either individuals or institutions, seems unthinkable). Even discounts on meetings registrations are extended to people beyond our membership (because our meetings are joint). When paying dues, our members sometimes ask what they get in return, and this blurring of member benefits and professional outreach makes it hard to give a direct answer.

A list of activities on which we spend our money therefore looks like a list of *outreach*, that is, things we do for the entire mathematics community and not just for our members. It's important to keep in mind that almost every one of these things benefits members, either directly or indirectly, and hence a part of every activity is a "member benefit" as well as outreach.

Here is a list of some of that outreach, divided into categories that reflect the part of the Society most directly responsible for the activity.
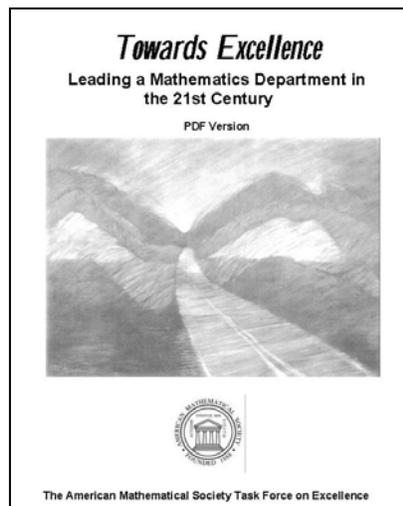
Membership and Programs

This is the part of the AMS one usually thinks of when thinking about outreach. Its activities are as varied as any at the AMS, and reach nearly every part of the mathematical community. Here is a sample.

Annual Survey
The AMS surveys over 1,500 mathematics, applied mathematics, and statistics departments each year to gather information on everything from PhDs to salaries. Results are reported in the *Notices* and on the AMS website. This is a large effort, costing more than $100,000 each year, but it provides invaluable information to mathematicians, especially young ones. The Annual Survey is cosponsored with the American Statistical Association, the Institute for Mathematical Statistics, and the Mathematical Association of America.

http://www.ams.org/employment/surveyreports.html

CBMS Survey
This detailed investigation of undergraduate programs in the mathematical sciences in the U.S. has been conducted every five years since 1965 under the auspices of the Conference Board on the Mathematical Sciences (CBMS), with funding provided by the NSF. The AMS became a partner in the actual conduct of this survey in 1990, held the NSF grant and provided survey infrastructure support for the 1995 survey, and is doing the same for the 2005 survey.

http://www.ams.org/cbms/

Assistantships and Graduate Fellowships in the Mathematical Sciences
This annual publication contains information on the graduate programs of mathematics and statistics departments in the U.S. Its purpose is to provide prospective graduate students with a

current and reliable source of basic information on graduate programs as a first step in their exploration of programs to which they might apply. A copy is provided free to every department listed in the AMS Professional Directory and is provided free to AMS members upon request. It is also available on the AMS web site.

http://www.ams.org/employment/asst.pdf

Employment Information in the Mathematical Sciences (EIMS)
EIMS has become a standard location for advertising academic, and some industrial, positions in mathematics. While the traditional yellow print publication still exists, most job seekers access the ads over the web. The ads are heavily browsed by mathematicians from all over the world.

http://www.ams.org/eims/

Employment Center
The Employment Center takes place at the Joint Meeting each year and used to be called the "employment register". It is now a centralized site for employers and job applicants to meet while at the January meetings. A sophisticated message center and optional scheduling system help with appointments, but employers use it in a variety of ways. This project is jointly "sponsored" by the American Mathematical Society, the Mathematical Association of America, and the Society for Industrial and Applied Mathematics, but it is carried out entirely by AMS staff.

http://www.ams.org/emp-reg/

> **Employment Services for Ph.D. Mathematicians**
>
> - EIMS Job Listings (post or browse)
> - Employment Center (Interviewing Program)
> - AMS Coversheet
> - Mathjobs (automated system)
> - Advice for new Ph.D.'s
> - Programs for graduate students and new Ph.D.'s

MathJobs
This is a new service provided by the AMS in cooperation with Duke University. It is a web service that connects job applicants, employers, and reference writers in a flexible way that makes the application process easier for all. The service is free to applicants, but costs a modest fee for employers. We now have 62 employers and about 2700 applicants using the system, with more than 100,000 logins to the system during the current recruitment season.

http://www.mathjobs.org/jobs

Young Scholars Program
Summer programs for talented high school students played an important role in the careers of many current mathematicians. For the past seven years, the AMS has provided small grants totaling about $80,000 each year to help such programs. Part of the money is used as scholarships, but the modest awards are largely used as seed money to obtain further funding. The Society has

established the Epsilon Fund in order to endow this activity, with a goal of reaching two million dollars. We are about three-quarters of the way to meeting that goal.

http://www.ams.org/employment/epsilon.html

REU Conference

The Society conducted a workshop on undergraduate research in 1999 with funding from the National Security Agency. This year, we will repeat that workshop, although with a broader focus (to include a variety of undergraduate research experiences). The AMS maintains a central list of all REU programs on its website at

http://www.ams.org/employment/reu.html

Math in Moscow Semester for Undergraduates

For the past five years, the Society has carried out this program with support from the National Science Foundation. Undergraduates (and a few graduate students) apply to spend a semester at the Independent University in Moscow, working in an intensive mathematical program designed for the very best students. It is a unique opportunity to work with some of the best mathematicians in Russia. Returning students have praised the program and commented about the profound affect on their careers.

http://www.ams.org/employment/mimoscow.html

Early Careers

What good is a major in mathematics? We all hear that question asked every day and to find an answer the AMS has recruited a group of mathematics departments to survey their recent graduates in order to profile their jobs after graduation. The profiles will accumulate over time, but the first batch is already posted.

http://www.ams.org/early-careers/

ICM Travel Grants

Since 1990, the AMS has administered NSF funding for travel support of U.S. mathematicians attending the International Congress of Mathematicians (ICM). Approximately $250,000 in travel grants have been awarded each time through the program. The same effort is planned for ICM 2006 in Madrid, Spain. Approximately 125 - 150 awards are administered, with a portion going to recent PhDs.

http://www.ams.org/employment/icmapp.html

SACNAS Annual Meeting

The Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) holds lively meetings each year in which the AMS participates. The central goal of these meetings is to encourage outstanding undergraduates who show an interest in pursuing advanced degrees in science and mathematics. The AMS provides financial support for

the meeting and staffs an exhibit with materials of interest to the undergraduates attending the meeting.

http://www.ams.org/ams/sacnas2005-mtg.html

Ky Fan China Program

Funded by a gift from Ky and Yu-Fen Fan, the AMS carries out a program to facilitate collaboration between Chinese and American researchers. The program provides grants for Chinese mathematicians (especially young ones) to visit departments in the U.S. and Canada, and for American mathematicians to visit departments in China.

http://www.ams.org/employment/chinaexchange.html

Book & Journal Donation Program

Mathematicians often ask about donating books and journals to departments in currency-weak countries. The largest impediment is the cost of shipping materials. Using funds donated by the Stroock Family Foundation, the AMS matches individual donations of mathematics books and journals with libraries and mathematics departments at educational institutions around the world, and reimburses donors for the cost of shipping. Work is currently underway to expand this program.

http://www.ams.org/employment/bookdonation.html

Affiliate Membership

For nearly twenty years, the Society has offered special memberships to all mathematicians in lower-income countries (as classified by the World Bank). This is now referred to as "affiliate membership" (it used to be called "Category-S"), and it provides such members with full benefits, except that they must choose between the *Notices* and *Bulletin* as a (print) member journal. The dues rate is $16, which can be paid using AMS points—the equivalent of two mathematical reviews. There are more than 3,000 affiliate members. The cost of sustaining affiliate memberships is substantially more than the dues, but the Society gains a great deal from this program, and so does the community of mathematicians.

Public Awareness

The AMS created its public awareness office five years ago, and it continues to refine its operations. A large part of the work of the public awareness office is providing day-to-day publicity—cultivating contacts with the press, posting announcements (including posts to EureakAlert), preparing releases about events at meetings and workshops. A sample of other activities includes the following.

Mathematical Moments

Mathematicians have always had a tough time convincing the public of the value of mathematics. "Moments" are one-page, brief descriptions of applications, each with a graphic to draw attention. They have a common message: Mathematical research is ongoing and important to our lives. They have been especially popular in high school classrooms
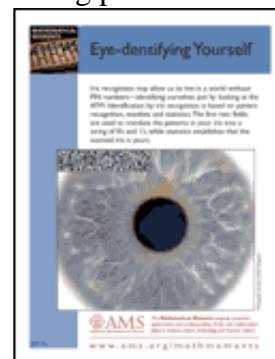
and undergraduate departments. We have now produced more than 50 Moments, and we plan to translate them into multiple languages for wider distribution.

http://www.ams.org/ams/mathmoments.html

Math in the Media/Feature Columns

The AMS website includes two wonderful features that are unknown to many mathematicians. One is Tony Phillips' commentary on mathematics in the media, which contains insightful analysis and concise essays on mathematics of every kind. The other is a monthly column written for "those who have already discovered the joys of mathematics as well as for those who may be uncomfortable with mathematics." Column editors have included David Austin, Bill Casselman, Joe Malkevitch, Tony Phillips, and Steve Weintraub. The collection extends back to 1997, and they all make wonderful reading. It's a spectacular resource and a wonderful place to browse, for experts and novices alike.

http://www.ams.org/mathmedia/

Who Wants to Be a Mathematician?

The popular Who Wants to be a Mathematician game show has now traveled around the country, held in high schools, college departments, and society meetings. Created by public awareness officer Mike Breen, the game is patterned (loosely) on Who Wants to be a Millionaire, and sparks the interest of large groups of students, who often cheer for their team mates. The game attracts students because it's light-hearted and humorous, but at the same time it reminds them that there are research mathematicians (30,000 at the AMS) who want them as future colleagues.

http://www.ams.org/wwtbam/
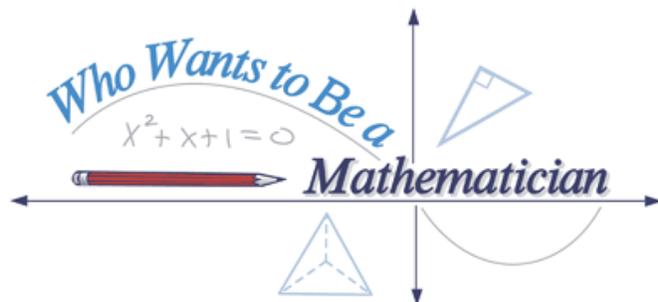
What's Happening in the Mathematical Sciences

Every two years or so, a new volume of *What's Happening* highlights some of the latest mathematical research in short essays focused on selected topics. These books are aimed at scientifically and mathematically literate audiences, but not experts. They have been popular among scientists in other disciplines.

http://www.ams.org/featurecolumn/archive/happening.html

Math Awareness Month

Every year since 1986, the Joint Policy Board for Mathematics (which includes four societies, including the AMS) has produced an annual celebration of mathematics centered on a particular

theme. The theme for 2006 is Internet Security. The Math Awareness website contains both posters and essays for use by mathematicians.

www.mathaware.org

Headlines and Deadlines

The public awareness office gathers information of interest to the community and e-mails it regularly to AMS members who subscribe to the service. This is a simple way to keep mathematicians informed about news and to remind them of important deadlines for meetings, proposals, and applications.

http://www.ams.org/enews

Washington Office

The most important goal of the Washington Office is to network with various groups in Washington, including Congress, the agencies, and (especially) the other scientific societies. Providing a visible presence for mathematics in these communities is critically important. But the Office also carries out a number of specific projects each year. Here is a sample of just a few.

Science Policy Forums

The annual meetings of the Committee on Science Policy and the Committee on Education take place in Washington and involve representatives from many different organizations in Washington. Mathematics department chairs are invited and frequently outnumber the committee members themselves. The give and take between mathematicians and the Washington representatives is good for both sides.

http://www.ams.org/government

Congressional Luncheons

For the past eight years, the Society has held an annual luncheon for congressional staff (and others). Each luncheon features a mathematician who describes in simple terms an important application of mathematics, emphasizing the connections of mathematics to all science and technology. These have been popular and effective, highlighting both mathematics and the Society.

http://www.ams.org/government/congress-briefing-nov05.html

Congressional Fellows

Beginning last year, the AMS now participates in the AAAS Congressional Fellows program, supporting a mathematician who serves for one year in a Congressional office. While the fellows do not specifically represent the interests of mathematics (or the AMS), they provide a special perspective for Congress about science and research. Fellows usually return to the mathematical community, providing a future resource of mathematicians knowledgeable about science policy.

http://www.ams.org/government/congressfellowann.html

How Mathematics Helps Predict Storm Surges
Joannes Westerin
Congresswoman Eddie Bernice Johnson (D-TX)
Clint Dawson

Mass Media Fellows

For a number years, the AMS has participated in the AAAS mass media fellows program by supporting one or two fellows each summer. Fellows are typically graduate students who work for a summer at some media outlet (a newspaper, magazine, or television station), learning about the public presentation of science. The collection of fellows is a great asset to the mathematics community, and the AMS has made good use of their talents.

http://www.ams.org/government/massmediaann.html

Department Chairs Workshops

Each year, the AMS conducts a day-long workshop for present or prospective department chairs. The emphasis is on practical problems—dealing with budgets, deans, and personnel, for example—and participants spend much of the time in open conversation sharing ideas. The workshops are always led by a small group of experienced chairs, who set the agenda and conduct the meeting itself.

http://www.ams.org/government/chrsworkshop06report.html

Coalition for National Science Funding

The CNSF is an alliance of over 100 scientific and professional societies and universities, united by a concern for the future of the nation's science, mathematics, and engineering. This coalition, chaired by Samuel Rankin, the Director of the AMS Washington office, and its primary goal is to increase the federal investment in the National Science Foundation. The AMS always participates in the annual CNSF Exhibition, which showcases the crucial role the NSF plays in meeting the nation's research and education needs. The Exhibition provides an opportunity for university researchers and educators to describe their work to leaders on Capitol Hill. This past year, Robert Lipton of Louisiana State University represented the AMS

Congressman Vernon Ehlers (R-MI) and Robert Lipton

at the exhibition, highlighting his recent work on "Mathematics for Advanced Composites Technology."

This is a sample of the ways in which the AMS spends its money, on programs that bring in less money than they cost. There are many more that often go unnoticed because they are so common. The *Notices* and *Bulletin* are both member journals that people expect as a member benefit. The *Combined Membership List* and *Professional Directory* are used by mathematicians every day. Periodically updating the Mathematical Sciences Classification (MSC), maintaining the Journals Price Survey (a ten-year history of prices and page counts for roughly 300 journals), providing TeX fonts and tools —all these services we do for the community, and they are ways in which we spend our money.

The Money We Save

The AMS has two types of savings, the endowment and the reserves. Both are crucial to the Society's operations, but in different ways.

The endowment is made up of gifts to the Society, many of which were given for a specific purpose, such as a prize. The Society has added six new prizes in the past six years (the Levi Conant, Joseph L. Doob, Leonard Eisenbud, E.H. Moore, David P. Robbins, and Albert Leon Whiteman prizes). These are all funded using annual income, which is computed as 5% of the gifts and its appreciated value.

The AMS does other things through its endowments. We award approximately eight Trjitzinsky Fellowships of $3000 to mathematics majors each year. We give Menger awards to outstanding mathematics-related projects at the annual Intel Science Fair and help fund the judging. We award Centennial Fellowships to young mathematicians, providing full support for a year at critical points in their careers. (The Centennial Fellowships are only partially endowed and are largely funded through annual gifts from our members.)

Joseph L. Doob
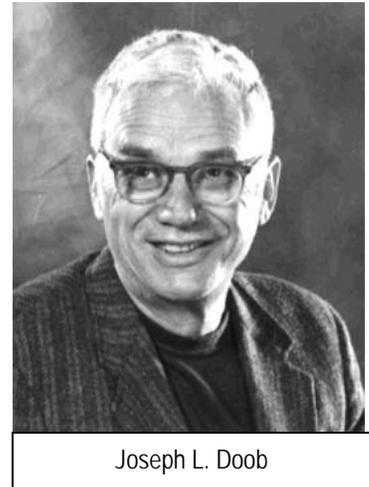
Not all gifts to the endowment have a specific purpose. Income from these unrestricted gifts is used for special projects each year, as designated by the Board.

The reserves of the Society represent another kind of savings—the kind that a family sets aside in case of an emergency. In the early 1980s, the AMS faced such an emergency when revenue from subscriptions suddenly plummeted. In just a few years, the Society used up all its reserves and contemplated taking out large loans. After that experience, the Board began to build reserves that would sustain the Society through future emergencies, and it set a goal of reaching three-fourths of a year's operating budget. To reach that goal, funds were set aside at regular intervals from operations, and because the investments did well during this period, the AMS reached its target ahead of schedule.

Endowment & Reserves

Endowment (restricted) 5%

Endowment (unrestricted) 10%
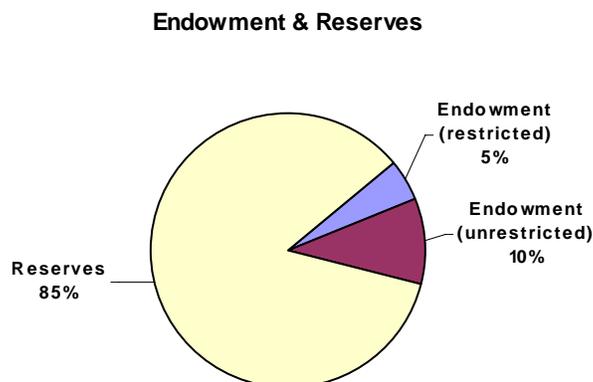
Reserves 85%

Now that reserves have grown beyond their original purpose (as an emergency fund), the Society has begun to use them as a new source of revenue. Since 2002, a portion of the reserves has been used to generate income for operations each year, by computing income as 5% of the value (like the endowment). This new revenue provides more than $600,000 annually. While this is only 2.5% of our present revenue, it will likely become more and more important in future years. It represents a new source of income for the Society, much like income from a family's savings that has been invested wisely.

Conclusion

Viewing the operations of the Society through its finances can be misleading, of course; the AMS does more than merely earn money, spend it, and save it. But taking note of which programs produce revenue and which consume it can be a useful exercise. It helps the Society's members and leaders to recognize the scope and breadth of our activities.

It also helps to remind us that our activities are interdependent. Members of the Society are sometimes passionate about one particular aspect of the AMS, for example, meetings, publications, or advocacy. They sometimes view their own interest as the *most* important—as something that should be supported by (but not support!) the rest of the Society's programs. But the AMS would not exist for long if everything it did lost money.

A healthy society consists of many parts, all of them woven together, all supporting one another—and all of them important.
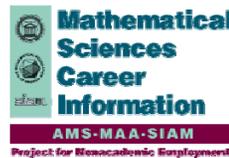
John Ewing

The Executive Director is authorized to make changes in these registration fees and then inform the ECBT. The following increases in fees for the Employment Center at the January 2007 meeting have been approved:

	Jan 2007 fee	Jan 2006 fee	Jan 2005 fee
Employers Advanced Registration			
First Table	$235	$230	$225
Second Table	$ 85	$ 80	$ 75
Employers On-site Registration			
First table	$315	$310	$305
Second table	$115	$110	$105
	Jan 2007 fee	**Jan 2006 fee**	**Jan 2005 fee**
Applicants Advanced Registration	$ 44	$ 42	$ 42
Advanced Registration for Winter List w/Message Center Only	$ 22	$ 21	$ 21
Applicants On-site Registration	$ 82	$ 80	$ 80
On-site Registration for Winter List w/Message Center Only	$ 22	$ 21	$ 21

The following increases in fees for the Short Course at the January 2007 meeting have been approved:

	Jan 2007 fee	Jan 2006 fee	Jan 2005 fee
Advanced Registration			
Member	$ 90	$ 87	$ 85
Non-member	$120	$115	$108
Student/Unempl./Emeritus	$ 40	$ 38	$ 37
On-site Registration			
Member	$120	$118	$115
Non-member	$151	$148	$140
Student/Unempl./Emeritus	$ 60	$ 57	$ 55

American Mathematical Society
2005 SACNAS National Conference
Sponsorship Report

Conference Attendance, SACNAS 2005

Participant Type (there is a slight overlap since many attendees come in more than one capacity):

Undergraduate Students	858
Graduate Students	368
Post-docs	56
K-12 Educators	108
Professionals (Faculty, Researcher)	998
Total number of conference attendees	**2388**

Mathematics, statistics and computer science participants

Numbers are provided by SACNAS based on self-reported data from participants who have given information on their field of study - approximately 80% of all participants.

Total Math, Stats and CS participants	**352**
Professional	117
Teachers	12
Undergraduate students	149
Graduate students	69
Postdoctoral researchers	5

Allocation of AMS Sponsorship Funds:

Total amount of sponsorship applied to speaker lodging, airfare and registration (meals) costs for one scientific symposia session.

Name	Field	Lodging	Registration	Travel
Erika Camacho	Mathematics Jr. faculty	$0.00	$0.00	$259.39
Anthony Castro	Mathematics postdoc	$148.45	$425.00	$548.20
Maytee Cruz-Aponte	Mathematics postdoc	$437.19	$425.00	$602.20
Jose Romero-Mariona	Mathematics grad student	$229.08	$425.00	$342.09
Stephen Wirkus	Mathematics faculty	$218.59	$425.00	$514.81
Subtotal		$1033.31	$1700.00	$2266.69
				$5000.00

Mathematics-related sessions offered:

<u>Scientific Symposia Sessions</u>

Aspects of Pure and Applied Mathematics

This session will provide a look into topics from pure and applied mathematics. These are mostly academic classifications and the session will show that in practice it is difficult to decide what is "applied" and what if "pure" mathematics. The topics have been chosen to be outside traditional undergraduate courses, but the speakers will build the ideas based on standard undergraduate material.

Ricardo Cortez, Ph.D., Chair
Associate Professor, Mathematics Department
Tulane University

Trachette L. Jackson, Ph.D.
Associate Professor, Mathematics Department
University of Michigan
Mathematical models of tumor growth

Errol Montes Pizarro, Ph.D.
Professor, Mathematics and Physics Department
University of Puerto Rico at Cayey
Nonlinear elasticity

Alejandro Adem Diaz de Leon, Ph.D.
Professor, Mathematics Department
University of Wisconsin-Madison
Cohomolgy

Mary Lou Zeeman, Ph.D.
Professor, Applied Mathematics Department
University of Texas-San Antonio
Mathematical Biology

Mathematics of the New Generation

This session is designed to bring together recent Ph.D.'s in the mathematical science present their research. The proposed speakers will be excellent role models for the undergraduate and graduate students at the conference since they participated in research programs associated to SACNAS. At the same time they will be reconnected to the SACNAS network of mathematicians.

Stephen Wirkus, Ph.D., Co-Chair
Assistant Professor, Mathematics Department
Cal State Poly

Erika Camacho, Ph.D., Co-Chair
Assistant Professor, Mathematics Department
Loyola Marymount University

Alberto Marrero,
2005 Ph.D. from University of Iowa

Brandilyn Stigler,
2005 Ph.D. from Virginia Tech University

Angela Gallegos,
2005 Ph.D. from University of California-Davis

Mathematics Institutes (mini-courses)
The purpose of each mini-course is to expose a large number of advanced undergraduate and graduate students to a topic in applied or pure mathematics with particular emphasis on diverse approaches to problems, and connections to other areas of mathematics or other disciplines. The idea is to make the students feel encouraged to continue on to graduate school and boost their confidence by making them realize that even at this stage they are able to understand where the motivating questions come from. The mini-courses help the students understand that graduate research can be in their future and have an idea of the type of advanced techniques that this would require.

Mini-course A: Mathematics and Music
This mini-course will address the role that mathematics and statistics play in several aspects of music such as drum vibrations, acoustics, waves, harmonics, musical instrument design, time scales, alternative musical scales, digital representation of sounds and binary numbers, signal sampling, Fourier series, etc. The presentations will emphasize the mathematics that undergraduate students are familiar with, such as linear algebra and statistics, as well as more advanced topics.

Juan Restrepo, Ph.D.
Associate Professor, Mathematics Department
University of Arizona

John Little, Ph.D.
Assistant Professor, Mathematics Department
College of the Holy Cross

Stephen Cox, Ph.D.
Professor, Computational and Applied Mathematics
Rice University

Edward Dunne, Ph.D.
Editor, AMS Books
American Mathematical Society

Mini-course B: Dynamical Systems
This mini-course will focus on the wide range of applications of dynamical systems. These may include ecological models of competition, neural networks, population dynamics, discrete systems, classical mechanics, chaos theory, phase portraits, instabilities, etc. We aim to give the participants a wide view of the uses of dynamical systems in the study of physical phenomena. Some talks may also make the connection between dynamical systems and other areas of mathematics such as topology, geometry, fractals, and Julia sets.

Christopher Jones, Ph.D.
Professor, Mathematics Department
University of North Carolina-Chapel Hill

Araceli Medina-Bonifat, Ph.D.
Professor, Mathematics Department
University of Rhode Island

Rodrigo Perez, Ph.D.
Assistant Professor, Mathematics Department
Cornell University

Other Mathematics activities

Summer Mathematics REU-nion
Reunion of as many students as possible who have participated in the SACNAS related summer research programs SIMU (UPR-Humacao), MTBI (ASU) and RUSIS (Rice). There are now over 200 alumni of these programs. Some of them have completed their Ph.D.'s and others are at various stages of graduate school. Undergraduate mathematics students are invited to the reunion to hear about students' experiences in graduate school. The session will be an open forum for graduate students to discuss their experiences and offer advice to undergraduate students. This activity will strengthen the network of peers and mentors at SACNAS and will also introduce graduate students in their new role as mentors to undergraduates.

Who Wants to be a Mathematician? Game
The AMS sponsored game

Ricardo Cortez
Department of Mathematics
Tulane University
March 29, 2006

Epsilon Awards to Mathcamps, 2006

All Girls/All Math Summer Camp for High School Girls	University of Nebraska, Lincoln, NE	$3,000
Canada/USA Mathcamp	University of Puget Sound, Tacoma, WA	$2,500
Hampshire College Summer Studies in Mathematics (HCSSiM)	Hampshire College, Amherst, MA	$14,000
MathPath	University of California, Santa Cruz	$2,500
Michigan Math and Science Scholars Summer Program	University of Michigan, Ann Arbor, MI	$5,000
PROMYS	Boston University, Boston, MA	$14,000
PROTaSM (Puert Rico Opportunities for Talented Students in Mathematics)	University of Puerto Rico, Mayaguez Campus	$7,000
Ross Mathematics Program	The Ohio State University, Columbus, OH	$10,000

SEARCH	Mount Holyoke College, South Hadley, MA	$2,000
Texas State University Honors Summer Math Camp	Texas State University, San Marcos, TX	$12,500
Texas Tech University Summer Mathematics Academy	Texas Tech University, Lubbock, TX	$2,500
University of Chicago Young Scholars Program	University of Chicago, Chicago, IL	$5,000

Grand Total   **$80,000**

Ellen Maycock
Associate Executive Director
April 3, 2006

To: ECBT
From: Warren Page, Past Secretary of AAAS Section A (Mathematics)
Subject: AMS-support at the 2006 AAAS Annual Meeting
Date: March 23, 2006

Overview The AAAS Annual Meeting, considered by many to be the showcase of science, features a variety of presentation formats. In addition to more than one hundred and fifty symposia on themes of contemporary interest, there are individual topical area lectures and plenary lectures. The generous support of the AMS has been centrally important in enabling Section A to offer programs and speakers that communicate to general scientific audiences and the press (ergo, the public at large) the nature, excitement, and usefulness of mathematics.

February 16 – 19, 2006 AAAS Annual Meeting in St. Louis, MO   Summarized below are Section A's sponsored symposia and talks presented at this meeting.

NUMB3RS and the Challenge of Changing Public Perception of Mathematics, organized
   by Robert Osserman (MSRI) and Tony Chan (UCLA)
Motivation Behind the Creation of the Television Show NUMB3RS, Cheryl Heuton
   (Independent Writer)
The Role of a Mathematical Advisor to Television, Gary Lorden (Cal Tech)
How Does One "Act" Like a Mathematician? David Krumholtz (Independent Writer)
Discussant, Nicolas Falacci (Independent Writer)

> This symposium brought together key people who are involved in the creation of the CBS show *NUMB3RS*. First, Tony Chan provided information about the show, including ratings and how Texas Instruments and NCTM are using the show for mathematics education. Next, Cheryl Heuton discussed how the show was sold to CBS. Heuton described the proposal as a "passion project" for the writers, and CBS was sold on the show after five minutes. Gary Lorden then described his role as a consultant for the show. Real mathematics is used on the show, and there is a hope that teenagers will use the Internet to learn more about watching the show. Next, David Krumholtz, who plays the mathematician on the show, described his mathematics background ("I was terrible at math at school.") and how the show has raised his opinion of mathematics. He said that his inspirations for the role are enthusiastic mathematicians like Chan and Lorden. Nicolas Falacci, another writer for the show, discussed reading about Microsoft's *Mindsweeper* game on the Internet in a discussion of P versus NP, and how this is the type of mathematics they want to include on the show because people say, "Oh, I know that." Finally, there was a question-and-answer period, including answers from a "shadow panel" in the audience. Some members of the "shadow panel" were David Baltimore (President of Cal Tech), Keith Devlin (Stanford), and Bill Nye ("The Science Guy"). Many clips of the show were shown during the symposium. The room was nearly full, starting with 160 attendees and reaching nearly 200 before the end of the symposium.

<div align="right">Edward Aboudafel</div>

Astrodynamics, Space Missions, and Chaos, organized by Edward Belbruno (Princeton) and co-sponsored with the Physics Section
Using Chaos to Find Revolutionary New Routes by Spacecraft and the Origin of Moon,
  Edward Belbruno,
A New Theory of Trajectory Design and NASA's Vision, David Folta (NASA)
Using Chaos to Control Satellite Trajectories, Elbert Macau (INPE, Brasil)

> This was a nicely conceived interdisciplinary session discussing a new application of dynamical systems to the mission design of spacecrafts. The basic idea is that connecting orbits between Lagrange points (where gravitational effects zero out) can provide trajectories for spacecraft to travel long distances using the underlying gravity induced dynamics of the solar system as opposed to large quantities of fuel. Belbruno described the basic mathematical ideas (which he helped create), Folta described the issues that needed to be addressed to implement the basic ideas (from using the most exact model equations that exist to numerical issues in finding the trajectories), and Macau talked about some of the control issues. Approximately 75 people attended the session. The presentation would have benefitted from better graphics (Belbruno used and written overhead transparencies). Overall this session illustrated a novel use of advanced mathematical and computational ideas to address issues of much popular interest, and it was a success.
>
> Martin Golubitsky

Million Dollar Mathematics:Challenge Problems in the 21st Century, organized by John Ewing
    and James Carlson (Clay Mathematics Institute)
From the Hilbert Problems to the Millennium Problems, James Carlson
The Greatest Challenge:The Riemann Hypothesis, J. Brian Conrey (American Inst. of Math.)
Deciding when Problems are Hard:"P vs. NP", Steven Rudich

> The session on the Millennium Prize Problems had an audience of approximately 60 persons. This was quite remarkable for an 8:30 AM time slot in parallel with the Fellow's Breakfast and Forum. The smoothest talk of the session was a beautiful review of the history and status of the Riemann hypothesis given by Brian Conrey. The breadth of approaches suggests that one might even dream of finding the solution to this famous problem within our lifetime. Other speakers covered a history of prize problems, and the P vs NP problem. A Norwegian radio reporter interviewed a number of participants after the session, demonstrating a connection with the popular press. Copies of the essay on the history of the Millennium Grand challenge were printed by the AMS and were also popular; available at the entrance, they disappeared before the session began.
>
> Arthur Jaffe

Tsunamis: Their Hydrodynamics and Impact on People, organized by Walter Craig (McMaster
  University) and John Mutter (Columbia University)
Modeling Tsunami Propagation by Boussinesq Systems, Jerry Bona (University of Illinois)
Seismology of Tsunami-generating Events, Art Lerner-Lam (Lamont-Doherty Earth Observatory
  of Columbia University)
Understanding the Tsunami: Co-Dependence of Mortality Risk and Poverty, John Mutter
Hydrodynamics of Tsunami Waves, Efim Pelinovsky (Institute of Applied Physics, Russia)
Dynamics of Large Ocean Waves and the Prognosis for Tsunami Propagating Forecasting,
  Walter Craig

> This symposium grew out of discussions of the Sumatran Earthquake and the associate
> tsunami. It featured four speakers from a variety of backgrounds. The audience numbered
> about 60 to 70. There was a fair amount of lively audience participation, and an extended
> discussion in several small groups at the conclusion of the symposium.
>
> Walter Craig's talk was concerned with placing some of the challenges of modeling
> tsunami generation, propagation and run-up, and the associated prospect of early
> warning, into perspective. It focused in particular on inherent limitations of geophysical
> detection of the character of large tectonic events, and on real time three-dimensional
> hydrodynamical modeling aimed at predicting the resulting tsunami danger. Jerry Bona
> described a set of fully three-dimensional equations that can be used to model the
> propagation of the tsunami as it traverses the open ocean. He also presented numerical
> simulations showing the model predicts qualitatively what was observed in the actual
> event. Lerner-Lam discussed seismogrphic aspects of the earthquake and its effect on the
> generation and early development of the Sumatran tsunami. John Mutter discussed the
> disturbing data coming out of this disaster, that the property and life loss is differentially
> experienced by peoples of differing social and economic backgrounds. Similar remarks
> hold true for the Katrina disaster in New Orleans.

Jerry Bona

Arches: Gateways from Science to Culture, organized by Kim Williams (Nexus Network Journal
Italy)
The Arch: Born in the Sewer, Raised to the Heavens, Matthys P. Levy (Weidlinger Assoc. Inc.)
"As Hangs the Flexibkle Chain":Arches from Hooke to the 21st Century, John Ochsendorf (MIT)
Galileo was Wrong! The Geometrical Design of Masonry Arches, Santiago Huerta (Escuela
  Tecnica Superior de Arquitectura de Madrid)
Gateway to Mathematics, Paul Calter (Vermont Technical College)
Ertha Diggs and the Stone Arch Mysteruy, Michael Serra (Key Curriculum Press)
Arches and CXulture, Donald Hanlon (University of Milwaukee)

> Taking its inspiration from St. Louis's Gateway Arch by Eero Saarinen and the theme of
> the AAAS meeting, "Grand Challenges, Great Opportunities," this symposium presented
> an exploration of the arch from the points of view of architecture, mathematics,
> engineering, construction history, and cultural symbolism. The arch, one of the most

beautiful ways that architects invented to go from "here" to "there," spans greater distances and sustains larger loads than a simple post and beam structure, but because it is also more complex, an Eastern proverb called it "the structure that never sleeps." Leonardo da Vinci described the arch as "two weaknesses which, leaning on each other, become a strength," a metaphor for the way that science and art lean on each other to strengthen our lives.

   Kim Williams opened the symposium with an overview of the history and statistics of Eero Saarinen's Gateway Arch. At 630 feet, the arch is the tallest monument in the National Park system, a marvel of pre-computer science engineering and a fitting monument to Jefferson's dream of western expansion. Matthys Levy's talk looked at historical development of the arch by the Egyptians, Greeks and Romans. Arch technology was known in Egypt and Greece, and arches are found, for instance, in service and underground structures in those culture, but are not part of the vocabulary of their monumental architecture. The Romans, however, mastered arch construction on a large scale and made it the apex of their architectural expression, as in the triumphal arches. John Ochsendorf explained that the characteristics of Saarinen's arch were well known to seventeenth-century English architect Robert Hooke, who explained that "[a]s hangs the flexible chain, so stands the rigid arch." He then traced the development of the arch through the nineteenth-century work of Gustave Eiffel and the twentieth-century bridges of Robert Maillart. He discussed recent research at MIT on the interactive analysis of structural forms, which suggests new ways for arches to be used in design and construction in the future.Santiago Huerta, president of Spain's society for construction history, discussed the historical geometrical rules for the proportional design of arch, independent of the scale, which were attacked by Galileo in the sixteenth century. In fact, Galileo's law applies only to strength problems, but not to problems of stability, which are indeed governed by geometry. Paul Calter examined the formula that governs the shape of the St. Louis arch, $y = 68.8(\cosh 0.01 - 1)$. Step-by-step, Calter broke the formula down to explain it in intuitive terms such as compound interest, the exponential growth of rabbit populations and the exponential decay of the temperature of a cup of coffee, then built it back up again to explain how it determines the shape of the arch. Donald Hanlon examined the symbolic function of the arch in terms of what it can express *for* – as well as *about* – a culture. The Roman triumphal arch, Paris's Arc de Triomphe and the Gateway Arch all testify to arch's symbolic capacity to embody and express the concepts of entry and passage. Referring to the earlier talk by Matthys Levy, Hanlon asked: if the Egyptians and Greeks were familiar with arch technology, why did they choose not to use it as a primary form? The answer lies in the relationship between those cultures and technology. We live in a culture that values technology in itself, so that all technological developments are immediately embraced. Ancient cultures, however, valued technology less than tradition, therefore although their architecture developed from wood to masonry construction, they continued to privilege the post-and-beam forms of wooden architecture. Michael Serra led symposium participants in a surprising and fun hands-on arch construction project using familiar objects (Chinese take-out cartons) in an unfamilar way: "these are stone voussoirs from an ancient miniature bridge uncovered by archaeologist Ertha Diggs. She has asked us to determine

the number of stones in the original bridge." This makes it possible to understand both arch mechanics and the mathematics behind the arch through actually constructing them.

Kim Williams

How Insects Fly, Organized by Jane Wang (Cornell University)
Falling Paper, Dragonfly Flight, and Making a Virtual Insect, Jane Wang
Active and Passive Flapping Flight,. Steve Childress (New York University)
Neural Control of Aerodynamics, Michael Dickinson (California Institute of Technology)

The minisymposium on 'how insects fly' on Feb19 in the annual AAAS meeting drew a large audience. The room was nearly packed (despite its 8:30am time slot on Sunday). The symposium focused on recent discovery and progress in research on insect flight. Jane Wang spoke about 'falling paper, flapping flight, and making a virtual insect', in which she discussed new insights gained from studies of dragonfly flight and falling paper and the efficiency of flapping flight compared to airplanes. Steve spoke about 'passive and active flapping flight.' He showed his experiment of passive 'paper bugs' suspended by a oscillatory flow with no DC component and also theoretical studies of transition to flapping originated from field work of terapods. Michael Dickinson spoke about the 'neural control of aerodynamics.' He showed how flies execute rapid turns, how they responds to visual cues, and how they integrate this information to perform a variety of aerodynamic moves. The audiences were enthusiastic about the topic and many stayed for questions. All three speakers also gave a news briefing on Feb 18 and interviews to news reporters from BBC, German public radio, and The New York Times.

Jane Wang

Paradise Lost? The Changing Nature of Mathematical Proof, organized by Keith Devlin
   (Stanford University)
What Do Mathematicians (Usually) Mean by Proof?, Keith Devlin
Complex Proofs and the Classification of the Finite Simple Groups, Michael Aschbacher
   (Caltech)
The Poincare Conjecture: A New Proof Paradigm, Steven Krantz (Washington University)
Formal Proof and the Kepler Conjecture for Sphere Packings, Thomas Hales (University of
   Pittsburgh)

The session examined the changing nature of mathematical proof resulting from (i) the emergence of computer-aided proofs and (ii) the appearance of proofs that result from the work of many mathematicians and are too long for a single person to read the whole thing. Keith Devlin began by taking a broad historical look at the development of the proof concept, and he explained why proofs are so important to mathematicians. Michael Aschbacher described the claimed proof of the classification theorem for all finite simple groups, completed (if indeed it is complete) around 1980. Aschbacher has been leading a major effort to produce a single account of the proof, but this is as yet nowhere near completed. Steven Krantz (Washington University) outlined the Poincare Conjecture, and

the recent claim by Grigori Perelman to have proved the conjecture, and summarized the present, somewhat confusing state of affairs regarding the veracity of Perelman's claim. Thomas Hales described his 1998 proof of Kepler's Sphere Packing Conjecture, a computer-aided proof the he is currently in the process of subjecting to computer verification.The audience for the session varied between 40 and 80.

<div align="right">Keith Devlin</div>

Section A's Reception   Section A's reception, in honor of its symposia speaklers and successful symposia, was an especially nice way to cap the AAAS program's *Special Mathematics Day Event*. More than 150 people attended this reception, which was supported by AMS, SIAM, and the University of Houston Department of Mathematics.

February 15 – 19, 2007 AAAS Annual Meeting in San Francisco   Section A's Committee is currently working to produce another informative blend of mathematically-related symposia for this meeting. Potential symposia based on current efforts include the following.

Mathematical Medical Imaging
Wild Fires/Forest Fires
Symmetry in Physics
Evolution and Control of Drug Resistance
Evolutionary Considerations on Vaccine Use
Evolutionary Game Theory: Biology and Game Theory
Advances in Mathematical Ecology
Mathematics Behind the Movies
300th Anniversary of Euler's Birth
Mathematics of Search Engines

The officers of Section A gratefully acknowledge AMS's annual support in helping to communicate the value and utility of mathematics to scientists and the public at large.

Postscript   My tenure as Secretary of Section A concluded at the end of the 2006 AAAS Annual Meeting. I wish to thank AMS and all who have supported and encouraged my efforts during these past eighteen years of service. I am confident that you will continue to support the leadership of Section A's new Secretary, Edward Aboufadel at Grand Valley State University.

A Proposal for a Fellows Program of the AMS

The goals of the Fellows Program are:

- *To create an enlarged class of mathematicians recognized by their peers as distinguished for their contributions to the profession.*
- *To honor not only the extraordinary but also the excellent.*
- *To lift the morale of the profession by providing an honor more accessible than those currently available.*
- *To make mathematicians more competitive for awards, promotion and honors when they are being compared with colleagues from other disciplines.*
- *To support the advancement of more mathematicians in leadership positions in their own institutions and in the broader society.*

I. Program (steady-state)

A. The Fellows program of the American Mathematical Society recognizes members who have made outstanding contributions to the creation, exposition, advancement, communication, and utilization of mathematics.

B. The responsibilities of Fellows are:
- To take part in the election of new Fellows,
- To present a "public face" of excellence in mathematics, and
- To advise the President and/or the Council on *public matters* when requested.

C. All AMS members are eligible to be elected Fellows.

D. The target number of Fellows will be determined by the AMS Council as a percentage of the number of eligible members.[1] The target percentage will be revisited by the Council at least once every ten years and may be increased or decreased in light of the history of the nomination and election process. The intended size of each year's class of new Fellows should be set with this target size in mind.

E. Following an election process (see below), individuals are invited to become Fellows. They may decline and they may also resign as Fellows at any time.

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[1] This proposal's recommendation to Council is 5% of eligible members. At present there are about 30,000 eligible members so the number of Fellows would be about 1,500.

FINAL VERSION as approved by the April 2006 Council

F. Each year all Fellows are invited to a reception at the AMS annual meeting; and the new Fellows are announced at this reception followed by a press release. New Fellows receive a certificate and their names are listed on the AMS web site. The names of new Fellows are also included in the Notices.

G. If they are not already Fellows, the AMS President and Secretary are made Fellows when they take office.

II. Election Process

A. New Fellows are elected each year after a nomination process. Eligible voters consist of current Fellows who are also members of the Society. Both the election and the nomination process are carried out under the direction of the Secretary with help from the AMS staff.

B. The Election Committee will consist of nine members of the AMS who are also Fellows, each serving a three-year term, and with three new members appointed each year. The AMS president, in consultation with the Executive Committee of the Council, nominates the new members of the Election Committee in November of each year. At the same time, the President nominates a continuing member of the Election Committee to serve as Chair. The President's choices are approved by Council at its January meeting.

C. The Election Committee accepts nominations for Fellows between February 1 and March 31 each year. Nominations are made by members of the AMS. A member can nominate no more than 4 nominees a year.

D. To be eligible for nomination to Fellowship, an individual must be an AMS member for the year in which he or she is nominated as well as for the prior year.

E. A nominator must supply a package with the following information on the nominee:
   1. A Curriculum Vitae *of no more than five pages*.
   2. A citation of fifty words or less explaining the person's accomplishments.
   3. A statement of cause of 500 words or less explaining why the individual meets the criteria of Fellowship.
   4. The signatures of the nominator and three additional AMS members who support the nomination, with at least two of these individuals current Fellows.

F. A person can be nominated no more than 3 times in a 5-year period.

G. Each year the January Council provides a guideline for the number of nominations to appear on the ballot. The Election Committee assembles the ballot from the nominations bearing in mind this guideline, diversity of every kind, and the quality and quantity of the external nominations. The Election Committee has the

FINAL VERSION as approved by the April 2006 Council

discretion to make nominations itself if necessary to fulfill the general goals of the fellowship.

H. The ballot is available electronically (only) and voting is conducted throughout the month of September of each year. The Curriculum Vitae and citation for each candidate will be available to all eligible voters. Election is by plurality with the top one-half of the candidates elected. In case of a tie, more than one-half of the candidates may be elected.

I. Those nominees elected are invited by the President to become new Fellows of the AMS as of January 1 of the following year.

III. Initial Implementation

A. In the initial year of the program, all eligible AMS members who have done one or more of the following are invited to become AMS Fellows.[2]
   1. Given an invited AMS address (including at joint meetings).
   2. Been awarded an AMS prize.
   3. Given an invited address at an ICM.

B. An additional 50 Fellows are selected by a committee appointed by the President with the advice of the Executive Committee of the Council. Particular attention will be paid to selecting AMS members recognized for their contributions to education and service to the profession.

C. For the initial "seed pool" of Fellows there is no length of AMS membership required. Any person who falls into one of the three categories above, and who is an AMS member during the year in which this program is initiated will be invited to be a Fellow.

D. At least ten (10), but no more than fifty (50), new Fellows are elected each year until the total number of Fellows reaches 95% of the targeted size of the Fellowship.[3]

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[2] The seeding process described in III.A would produce offers of Fellows status to more than 800 current AMS members. The group of invited address speakers also includes approximately 400 additional individuals who are not currently AMS members.

[3] If 1,000 Fellows are named through the initial seeding, then we estimate that a steady state of 1,500 would be achieved in approximately 10-20 years under the proposed plan.

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AMERICAN MATHEMATICAL SOCIETY

To: Board of Trustees   **Date**: March 3, 2006
From: Connie Pass
Subject: Operating Fund Portfolio Management Report

SUMMARY RETURNS

The purpose of this memorandum is to summarize the Society's cash management policies and report on the operating portfolio's investment income performance during 2005. There are no proposals for changes in authorized investment limits or additional investment vehicles presented.

Investment earnings results by type and in total and other pertinent portfolio information for 2005 and the preceding six years are as follows:

	2005	2004	2003	2002	2001	2000	1999
Overnight Repurchase Agreements	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Money Market Funds	2.8%	1.0%	0.9%	1.7%	4.2%	5.2%	4.9%
Vanguard Fixed Income Mutual Funds;							
Short Term Corporate Bond Fund	2.3%	2.2%	4.3%	6.0%	8.2%	8.2%	3.3%
GNMA Fund	3.4%	4.1%	2.6%	9.7%	8.0%	11.2%	0.8%
Long Term US Treasury Fund	6.8%	7.3%	2.8%	15.6%	4.4%	19.7%	(8.7%)
Fidelity Floating Rate Bond Fund (12/04)	4.2%	0.5%					
High Yield Bond Funds	N/A	N/A	N/A	(13.7%)	(0.7%)	(6.9%)	5.6%
Vanguard Convertible Securities	6.6%	7.2%	31.6%	(9.4%)	(3.1%)	4.2%	30.4%
2 Year Treasuries	N/A	N/A	N/A	N/A	N/A	N/A	5.8%
TIPs (April 2005)	0.9%	N/A	N/A	N/A	N/A	N/A	N/A
Certificates of Deposit	3.1%	2.1%	2.1%	3.0%	6.0%	6.4%	5.4%
Common Stock	0.0%	0.0%	10.7%	(14.4%)	(25.47%)	0.0%	(2.5%)
Annual total portfolio return	3.3%	2.4%	3.7%	2.4%	4.4%	6.4%	5.1%
AMS benchmark - Avg 6 month CD rate per Federal Reserve Bank	3.7%	1.7%	1.2%	1.8%	3.7%	6.6%	5.4%
AMS returns versus benchmark	(0.4)%	0.7%	2.5%	0.6%	0.7%	(0.2%)	(0.3%)
Wkly Average Operating Portfolio (in 000's)	15,223	13,570	12,357	11,967	$11,510	$9,525	$8,800
Annual Investment Income (in 000's)	$503	$332	$453	$262	$509	$611	$452

At 12/31/05 operating fund investments equaled approximately $16,146,000 a decrease of $239,000 from the previous year. Operations provided just over $3,500,000 in cash in 2005, of which approximately $3,400,000 was invested in the long-term investment portfolio.

The return for 2005 is 40 basis points below the benchmark, the average annual 6-month CD rate per the Federal Reserve Bank of New York. In 2002 we changed the benchmark from the 3-month CD rate, as this is a better length of maturity for comparison purposes with our portfolio and the information is now easily retrievable. The 2005 return is below the benchmark because we decided to avoid the administrative burden of shortening CD maturities to 3 months and therefore could not take full advantage of the rising interest rate environment. Also, we tend to

keep a large money market balance during most of the year (20-35% of the portfolio) for liquidity purposes, and this return will be below the benchmark. Investments totaling approximately 17% of the portfolio achieved returns greater than the benchmark, which was not sufficient to pull the total return over the benchmark.

DISCUSSION

Recent History of Authorized Investment Vehicles and Limits. At the May 1996 ECBT meeting it was agreed that the Society should have as a goal an accumulation of current assets such that they exceed current liabilities. To help achieve this objective, at the May 1997 ECBT meeting a plan for the creation of an intermediate term investment portfolio was adopted. Increased limits of $1,000,000 (to $4,000,000) in our money market funds, $1,000,000 (to $2,000,000) in our Vanguard fixed income funds, and $500,000 (to $1,500,000) in Treasury Notes were approved. In addition, a $1,500,000 combined limit for other mutual funds, consisting of high yield and convertible bond funds, was established at this time. In May 2000, the limits for money market funds, fixed income funds and the high yield/convertible funds were each increased by $500,000. At the May 2002 ECBT meeting, the limit on the money market fund was increased to $5,500,000, primarily to accommodate the larger investment balance carried in the operating portfolio. In May 2004, The Board of Trustees added floating rate bond funds to the authorized investments, with an investment limit of $2,000,000. In May 2005, the Board changed the limit on money market investments to be 50% of the operating portfolio balance at any point in time.

The strategy of using an intermediate portfolio has occasionally resulted in greater volatility, but overall has generated an increase in the earnings of our operating fund investments. By shifting a portion of operating fund investments into slightly riskier investment vehicles we have, on average, increased the earnings compared to those that would have been achieved in low risk, short term investments.

Recent Portfolio Adjustments. In 2002 we reduced the amount in the intermediate portfolio due principally to poor performance in the high yield bond investment.   We also rebalanced the remaining bond fund investments to prepare for a probable decline in the value of long-term treasuries in the coming months. In 2003 and 2004, no such rebalancing was performed. A $1,000,000 initial investment in a floating rate bond fund was added in late 2004 and $500,000 in TIPS (inflation protected Treasury bonds) were added in April 2005. In late 2004 and into 2005, maturities of certificates of deposits were shortened to take advantage of the rising interest rate environment.

Changes in the Cash Management Environment. The equity markets continued to recover in 2005 and short-term interest rates continued to increase in response to actions of the Federal Reserve. However, long-term interest rates continued to be volatile. The markets have absorbed the Federal Reserve's stated policy of slowly raising short-term interest rates and those rates are still quite low, barely keeping pace with inflation. Consumer spending remained strong, and this drives about two thirds of the economy. However, this is not a healthy position for the long-term, particularly in light of the aging population. In this environment the operating portfolio fared relatively well, with an overall return of approximately 3.3%. The intermediate portion of the portfolio provided more than its relative share of this return.

Cash Management at the AMS. The following rules govern AMS's management of cash:

1. *Availability and Liquidity.* The placement of investments in the operating portfolio is coordinated with the Society's immediate and estimated future cash requirements, which are based on actual and projected revenue and disbursement streams. Cash needs to be available at the appropriate times to cover the operating expenses of the Society as they are incurred - payroll, payroll taxes and other withholdings, and vendor liabilities comprise the bulk of our cash needs. Adequate portfolio liquidity is the ability to turn investments readily into cash without suffering undo loss of principal.

2. *Income.* Cash in excess of immediate operating needs should be invested so as to optimize returns. The Society has intentionally accreted such excess cash, so that the ratio of current assets to current liabilities remains at least 1.5 to 1 (after removing the deferred revenue from both the numerator and denominator) or 1:1 without the deferred revenue adjustment. After investing an additional $2,000,000 in new money in the long-term portfolio in early December, these ratios were 2.34 to 1 and 1.3 to 1 at December 31, 2005.

3. *Preservation of principal.* Safety is of prime concern in investments of operating capital. Diversifying investment vehicles and monitoring investment maturity dates and market value fluctuations greatly reduces an investment portfolio's exposure to risk. Maximum allowable positions should be established for different types of investments.

Authorized Investments. The investment vehicles authorized by the Board of Trustees for the operating portfolio are as follows:

- *Certificates of Deposit.* As in prior years, a large percentage of the Society's operating investment portfolio has been invested in certificates of deposit, with a weekly balance totaling between 40%-50% of the total portfolio during 2005.

  We generally purchase "jumbo" CD's of federally insured savings institutions and commercial banks that are assigned an acceptable safety rating by a weekly bank rating newsletter. Current investment policies limit the amount of each CD to $100,000 (exclusive of accrued interest) per S&L and $400,000 per large commercial bank. In practice, the Society has only invested amounts up to $100,000 in any one financial institution and its affiliates. There is no limit to the total amount of CDs that can be held by the operating investment portfolio.

Issuer	Banks & Savings and Loans
Risk of default	None - federally insured
Risk of market decline	None
Maximum Amount	$100,000 per bank or S&L, $400,000 in large cap banks, unlimited in total

  We intentionally accumulate a large CD balance (generally for one-year terms, shorter terms are used to take advantage of rising interest rates) in order to increase the yield, even if slightly. This is what was done with a portion of the CD portfolio in 2005. In practice, the Society can accumulate a portfolio between $5,000,000 and $7,000,000 with a rate differential compared to money market funds of at least 50 basis points. After that, the difference in rates from available issuing banks (we invest only in banks with a minimum 3.5 star rating out of 5 per Bauer Financial) over money markets drops significantly, which usually does not warrant the additional administrative burden to the Society.

- **_Treasury Bills._** T-Bills are convenient to use when we have a large planned expenditure for a predetermined future date, such as contributions to the Economic Stabilization Fund; however, better rates are available on alternative forms of short-term operating investments. Treasury Bills have no market risk associated with them because they are backed by the full faith and credit of the US government, are issued for short durations and are highly liquid. Accordingly, there is no limit to the total amount of T-Bills we may hold in our portfolio.

Issuer	U.S. Government
Risk of default	None
Risk of market decline	None if held to maturity
Maximum Amount	Unlimited

- **_Cash and repos (repurchase agreements)._** The AMS uses a concentration account at Citizens Bank - Massachusetts into which all receipts are automatically deposited and from which all disbursements are made. Under a repurchase agreement, cash above an established minimum balance is "swept" on a daily basis and invested overnight in repurchase agreements. Under a repurchase agreement, the customer (AMS) purchases government securities and the bank agrees to "repurchase" them the following day. The rate earned on these depends on the dollar amount of the repo; it is generally very low in comparison to rates available on other investment vehicles. Interest rates on repurchase agreements have been extremely low for a number of years. Unless one is sweeping large amounts of cash throughout the year, the interest earned does not justify the fees charged to maintain the agreement in place. The AMS has not used this investment vehicle since 1999 and it is not expected to be used in the near future.

Issuer	Citizens Bank - Massachusetts
Risk of default	Minimal
Risk of market decline	None
Maximum Amount	$1,000,000
Comments	Collateralized by US Gov't securities

- **_Money market funds._** The Board of Trustees has authorized a maximum investment of 50% of the balance in the operating portfolio at any point in time. At the end of 2005 the balance in money markets approximated $4,419,000, principally in Vanguard's Money Market Prime portfolio.

  Yields on the funds averaged about 2.8% for the year and are currently at about 4.2%. There is very little risk to principal because the valuation of the initial investment is generally not subject to change. Balances in these funds are usually maintained only at levels needed for short-term operating needs in excess of short-term maturities, or for planned investments to be made in the near future (which avoids the administrative costs of 3 month CD's or T-bills), since they under-perform alternative authorized investment vehicles.

Issuer	Vanguard, Fidelity and Paine Webber
Risk of default	Minimal
Risk of market decline	Very Low
Maximum Amount	50% of operating portfolio balance

- *US Treasury Notes.* The Board of Trustees has authorized a maximum investment of $1,500,000 in US Treasury Notes. A loss of market value may be incurred on these investments in a rising interest rate environment if funds are needed before maturity and have to be sold; however this risk is slight as the Society's liquidity is deemed extremely adequate. Treasury Notes can be an attractive investment when interest rates are expected to decline and the yield curve is fairly steep. This has not been the case in recent history.

Issuer	U.S. Government
Risk of default	None
Risk of market decline	None if held to maturity, otherwise value moves inversely to interest rate changes
Maximum Amount	$1,500,000
Comments	Best used just before interest rates decline

In April 2005, $500,000 of inflation-protected Treasury notes (TIPS), which pay a stated rate of interest, plus inflation over the period outstanding (by adjusting the principal), were purchased. These investments have no risk of default and no risk of market decline if held to maturity, which is the intent when purchased in April, 2005.

- *Fixed Income (Bond) Mutual funds.* The Board of Trustees has authorized a maximum investment of $2,500,000 in fixed income mutual funds (initial investment, exclusive of reinvested income and share price increases, with appropriate disclosure to Treasurers and Board), and at the end of 2005 we had $2,746,000 invested. The initial investment amount is well below the limit. All of these investments are with the Vanguard Group of Valley Forge, PA. A combination of three funds is used: the High Grade Short-Term Corporate Bond portfolio, the GNMA portfolio, and the Long-Term US Treasury portfolio.

Issuer (currently used)	The Vanguard Group
Risk of default	Minimal
Risk of market decline	The longer the maturities of underlying investments, the higher the risk.
Maximum Amount	$2,500,000
Comments	Market value will decline as interest rates rise and increase as rates fall.

Historically, most of the volatility in the Society's short-term portfolio has been the result of market valuation adjustments on these investments (they are marked to market monthly); however, gains or losses technically are not realized on these funds until they are redeemed. In 2002, the relative mix of these investments was changed to be more heavily weighted to the Short-Term Corporate Bond portfolio and less weighted in the Long-Term US Treasury portfolio, due to expected volatility in longer term maturities. The GNMA fund is less affected by interest rate volatility than the Long-Term US Treasury, despite similarity in term length of the underlying securities, as these debt instruments support the housing industry.

Since these funds are different in nature, it is helpful to look at their characteristics separately, keeping in mind that the limit applies to the combined total.

Vanguard High Grade Short-Term Corporate Bond Fund:

Issuer (currently used)	The Vanguard Group
Risk of default	Low, due to quality of underlying debt instruments and borrowers
Risk of market decline	Low, due to short duration of underlying investments
Comments	Share price is relatively stable; return is determined by recent interest rates, as underlying debt is short duration
2005 return	2.3% with average monthly yield of 3.59%

Vanguard GNMA Fund:

Issuer (currently used)	The Vanguard Group
Risk of default	Low – while not backed by the full faith and credit of the US government, It isn't likely that the US government would allow GNMA to default on its obligations
Risk of market decline	Medium, as duration is longer
Comments	Since the GNMA obligations are linked to collateralized mortgage obligations, and mortgage rates tend to change more slowly than other long term rates, this fund is a bit less volatile when interest rates change.
2005 return	3.4%, with average monthly yield of 4.54%

Vanguard Long-Term US Treasury Fund:

Issuer (currently used)	The Vanguard Group
Risk of default	Low, as most underlying securities are US government direct issues
Risk of market decline	Highly sensitive to interest rate changes, as duration of underlying securities is long-term
Comments	This fund has caused most of the volatility in the Intermediate portfolio; staff mitigates some risk by adjusting investment amount
2005 return	6.8%, with average monthly yield of 4.52%

- **_High Yield and Convertible Bond Mutual funds._** The Board of Trustees has authorized a maximum investment of $2,000,000 in any combination of high yield bond and convertible securities accounts. At December 31, 2005 we had $1,040,000 invested in these vehicles, in one convertible securities mutual fund managed by the Vanguard Group. Gains or losses technically are not realized on these funds until they are redeemed, although, for financial statement purposes, the Society records these investments at market. It is not anticipated that further investments in this group of investment vehicles will be made in the near future.

Issuer (currently used)	The Vanguard Group
Risk of default	Medium to High
Risk of market decline	Sensitive to movements in the equity markets
Maximum Amount	$2,000,000

Comments	Total returns often parallel those of equity markets
2005 Return	6.6%

- *__Floating Rate Income funds.__* The Board of Trustees has authorized a maximum investment of $2,000,000 in Floating Rate funds. $1,000,000 was invested in the Fidelity Floating Rate High Income Fund in December 2004. The return for 2005 was 4.2% with minimal change in NAV. Gains or losses technically are not realized on these funds until they are redeemed, although, for financial statement purposes, the Society records these investments at market.

Issuer	Fidelity
Risk of default	Low
Risk of market decline significantly	Low, possibly medium if economy falters
Maximum Amount	$2,000,000
Comments	The fund is expected to have a relatively stable NAV with yield providing most of the return
2005 Return	4.2% with average monthly yield of 4.30%

Summary of Operating Portfolio Investments, December 31, 2005.

Description	Value at 12/31/05	Current Board Limit	Excess over Limit
Money Market Funds	$4,418,926	50% of total portfolio	NA
Certificates of Deposit	6,386,000	$100,000 per inst.	NA
Treasury Notes		1,500,000	NA
Vanguard Bond Funds:			
GNMA Portfolio	1,130,633		
Short-Term Corp Bond Portfolio	1,117,636		
LT US Treasury Portfolio	497,354		
Subtotal	2,745,623	2,500,000 (1)	NA
High Yield and Convertible Funds:			
Vanguard Convertible	1,040,000		
Subtotal	1,040,000	2,000,000	NA
Floating Rate Funds:			
Fidelity Floating Rate High Inc	1,046,684		
Subtotal	1,046,684	2,000,000	NA
$500,000 Face TIPs	499,383		NA
Common Stock	8,928	Source is Unrestricted gifts	NA
Total	$16,145,544		

(1) Limit is exclusive of reinvested dividends and share price increases. See discussion above.

Data Collection and Information Delivery ("Infrastructure") Project
Status Report
May 2006

Since September of 2005, the Infrastructure project has proceeded as two groups. The Information Systems Planning (ISP) effort has continued with the Providence computing department heads serving as the planning group. The "business" members of the Infrastructure Steering Committee together with Karen Mollohan have continued as the Business Rules Group (BRG).

Business Rules Group

The BRG is compiling a set of policies and rules as they pertain to key processes within a single department. There are two important goals. First, we are developing templates and techniques that can be used by other managers to undertake similar efforts in their departments with less involvement of the four members of the BRG. Second, we are documenting policies and rules to provide an accessible and useful tool for day to day management of the department, for training of new employees, and for allowing more decision making at lower organizational levels.

We plan to turn much of this effort over to individual department heads once work on the "demonstration" department is complete. Because these individuals will be undertaking this in addition to their regular duties, it is difficult to predict exactly when this will be done. This is especially true since we wish to give priority to the information systems planning efforts, as described below.

Information Systems Plan (ISP)

The ISP is a long-range computing plan for the Society that we expect will cover the next seven to ten years. The first two years are expected to be planned in more detail than the remainder of the plan. As each year passes, more detail will be added to ensuing years. While creation of the plan will be driven by the computing departments, it will be done in consultation with senior management and using input from the division heads and managers. The schedule for the creation of the ISP is summarized below.

Analyze the current Information Systems and Technology Environment – January through May

This task will involve reviewing and updating of the System Assessments that were created by the computing departments over the past two years. Work for this task will be done by the managers and staff of the computing departments.

Analyze current and future Business Requirements – January through July

This task will involve documenting the requirements of the business functions of the Society, with emphasis on how well these functions are supported by the computing systems. Members of the computing staff will collect and document business requirements by interviewing key members of business management and staff. Before the interviews are scheduled, management will receive a memo containing the function(s) that will be covered in each interview and the computing system(s) that supports that function. Before the interview, management will be asked to review and assess the business function and the system that supports it. Work for this task will be done by business staff and management, as well as computing staff and management.

Determine Information Systems and Technology Direction – May through July

This task will involve the review and modification of the principles that guide the creation and maintenance of computing systems at the Society. It will also involve setting long range goals and objectives consistent with those principles. These long range goals and objective must take into account trends and issues in computing as well as the needs and goals of the Society. Work for this task will be done by the managers of the computing departments.

Analyze Gap and Determine Options and Recommendations – August through November

This task will involve a review of the technical and business assessments performed, an analysis of the existing computing systems, noting the deficiencies of the current systems functionality both in terms of business requirements and technical requirements. Once the gaps for a computing system have been documented, various options (buy, modify, and/or develop) for closing the gaps will be considered. These options will be reviewed with senior management in order to develop a recommendation for each system. This task will be performed by the computing managers and staff with input and review from senior management.

Document Purpose, Scope, and Summary – November through December

This task will involve creating an Executive Summary of the ISP and documenting the purpose and scope of the project. This task will be performed by the computing managers.

Migration/Implementation Plan – November through December

This task will involve the scheduling of the recommendations from above. Creation of the schedule will require the determination of prioritization, resource requirements, resource availability, and interdependencies of the systems. This task will be performed by the computing managers in conjunction with senior management.

Prepared by Gary Brownell and Tom Blythe

American Mathematical Society
Committee on Science Policy Meeting
April 25-27, 2006
Washington, DC

Summary Report

The 2006 Committee on Science Policy meeting was designed to allow attendees to meet with Members of Congress and their staff to discuss increased funding for the National Science Foundation in the FY 2007 federal budget. The meeting began with a reception and dinner on Tuesday evening, after which there was an orientation session on the FY 2007 Administration Budget Request, on how to conduct meetings with congressional offices, and on the message that was to be delivered to Congress. All day Wednesday was devoted to meetings with Members of Congress and their staffs and Thursday morning was dedicated to discussing the meetings held the previous day and to appropriate follow-up strategies.

Highlights from orientation presentations:

James Turner, Chief Counsel, Minority
House Science Committee
Jim Turner began his presentation by discussing the political climate on Capitol Hill and the ongoing pressures on the federal budget. He discussed the fact that there are few people with a science background in Congress or on staff and how the importance of science is often overlooked when funding the budget. However, the Administration's FY 2007 Budget Request includes an allocation for the American Competitiveness Initiative (ACI). This initiative commits to doubling the investment in the key federal agencies that support basic research in the physical sciences and engineering over the next 10 years. Turner clarified, however, that Congress must approve the allocation for the ACI in the upcoming appropriations process. On Wednesday, CSP participants should focus on asking their Members of Congress to support the increases for research outlined in the ACI in the appropriation bills.

David Weinreich
AMS Congressional Fellow
David Weinreich spoke to attendees about the critical role lobbying plays in the legislative process. His role as a Congressional staffer has given him some insight into how to approach the meeting process with Members' offices. He gave attendees some practical advice about the desired length of the meetings, about conveying the message so that it will be heard and about simple courtesies such as being on time and saying "thank you." Weinreich also encouraged attendees to be sure to offer future guidance to the Members' office on issues in their area of expertise, to follow up once they leave the office and to try to meet with the Member again when they're at home in the district, perhaps during the August recess.

Sam Rankin
AMS Associate Executive Director
Sam Rankin began his presentation by discussing the message that attendees will convey in the meetings with Congressional offices. He detailed a one-page handout written in collaboration with SIAM that discusses the necessity of investing in mathematics in order to achieve competitiveness for the United States in today's global marketplace. This handout also succinctly requests that Members of Congress do two things: 1) support the Administration's FY 2007 Budget Request of $6.2 billion for the National Science Foundation (a 7.9% increase); and 2) support adequate funding for mathematics in future budgets.

Rankin also provided some meeting guidelines to attendees. He discussed the importance of explaining how funding for NSF and the mathematical sciences impacts the state/district of the Member of Congress and how using anecdotes is important to conveying this message effectively. He also talked about the amount of influence a Congressional staff has with a Member and how important it is not only to leave them with a clear understanding of the importance of increased funding for the NSF, but with a good impression of the meeting itself.

Capitol Hill Visits and Follow-Up Discussion
The thirty-seven CSP committee members and department chairs attending were divided into ten teams for the Capitol Hill visits. Each team had two to six members. Sixty-nine meetings were scheduled by the AMS Washington Office from 8:30am to 4:30pm on Wednesday. Each team had from six to nine meetings.

On Thursday morning, the CSP meeting continued with a discussion of the Wednesday Capitol Hill meetings. Each meeting group relayed their experiences to the larger group and gave their impressions of how receptive the congressional representatives were to the requests made for increased funding for the NSF in FY 2007.

The consensus of the group was that the meetings went very well and were useful to the process of relationship building with Members of Congress. Many attendees invited their representatives to visit their institutions and made themselves available as potential resources to the Member and staff. Attendees felt that it was important for the mathematical community to continue to participate in this kind of activity and that a long term commitment must be made to setting up interactions with policy makers and groups of mathematicians. Some suggestions were made for future meetings of this kind, including targeting Members who are integral to the appropriations process, providing more anecdotal information on the state level for attendees use, and encouraging mathematicians from influential states to participate.

CSP Activities at the Joint Mathematics Meetings, New Orleans 2007
After some discussion on suggested topics for CSP activities at the Joint Meetings in New Orleans in January 2007, the committee decided it would host a program centered around the Division of Mathematical Sciences at the National Science Foundation and its new Director, Peter March.

In addition, the committee discussed the AMS-MAA government speaker that CSP usually invites to give a talk at the Joint Meetings. Some ideas for speakers were discussed, but nothing was decided at this time. The committee will follow up with discussions on whom to invite via email.

Date of Next Meeting
The next meeting of the AMS Committee on Science Policy was scheduled for Tuesday-Wednesday, April 17-18, 2007 in Washington, DC. The meeting will begin at mid-day on Tuesday with presentations and an orientation session and will continue Wednesday with meetings with Members of Congress and their staff.

Submitted by Anita Benjamin
Assistant to the Director of the AMS Washington Office
May 10, 2006

AMS AUDITED FINANCIAL STATEMENTS
DECEMBER 31, 2005 AND 2004

Please see

http://www.ams.org/secretary/ecbt-minutes/ecbt-0506-att-28.pdf