

State of AMS, 2003

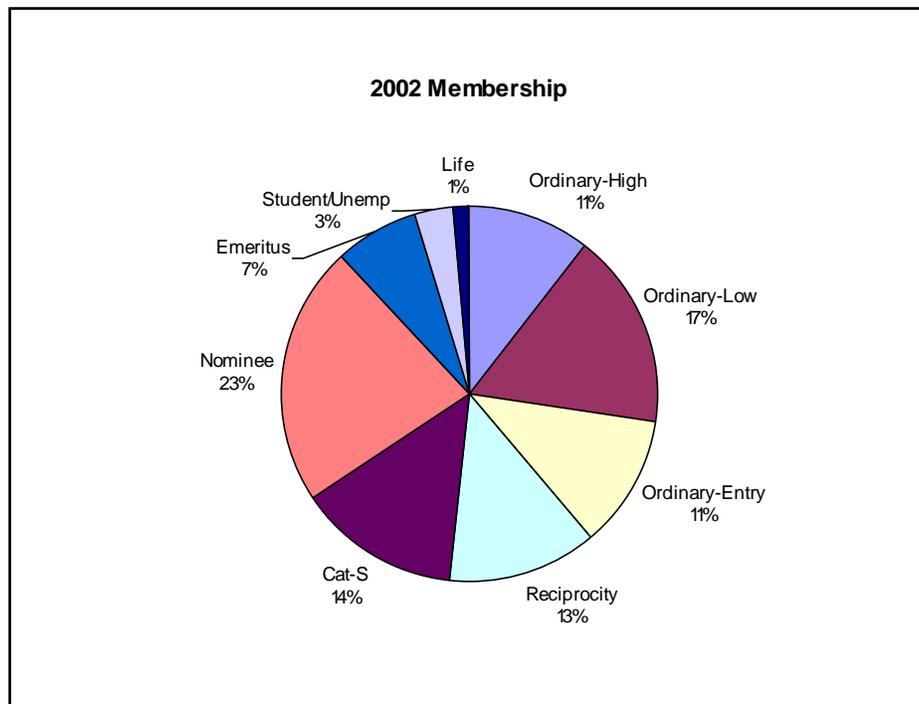
Most members think of the American Mathematical Society as an organization that *does* things—it represents their interests on matters of policy, holds meetings, awards prizes and scholarships, publishes books and journals, delivers *Mathematical Reviews*, provides employment services, conducts surveys ... and generally supports mathematics research. Most people don't care precisely how these things get done; they merely rely on the Society to do them.

In this year's annual report, I want to tell you about *how* things are done rather than *what* is done. I will use this year's report to explain the structure of the AMS—that is, how the Society is organized in order to carry out its work.

It's a different view of the AMS, but a view that is worth seeing from time to time.

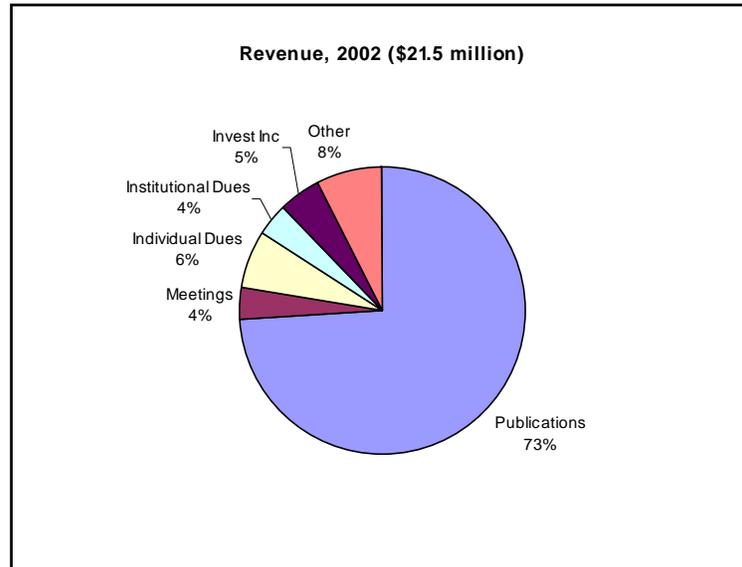
Overview

The AMS has over 27,000 members. More than a third of our members are international; about one-fourth are students. It's important to remember that there are many kinds of members—ordinary, life, emeritus, reciprocity, cat-S¹, etc. Over 7,000 of our members are nominees (that means they are appointed by their institutions as a benefit of institutional membership). Over 500 institutional members appoint those nominees.



¹ Category-S members are from developing nations and pay dues of \$16 (or equivalently write two reviews for *Mathematical Reviews*) each year for member benefits that include either the *Bulletin* or the *Notices*.

Operations of the Society generated more than \$21M in revenue during 2002. Most of that (73%) came from publications related activities. Only \$1.4M (6.5%) came from individual member dues, and only 4% came from meetings. Grants typically account for 3-4% of our revenue, but since expenses associated to the grants almost always exceed the grants themselves, they seldom contribute to the Society's general operations.



For the first time in 2002, we used "income" from a portion of the reserves to support operations, allocating approximately \$800,000 for that purpose. Our total reserves at the end of 2002 were slightly more than \$38M, including \$6.4M in the actual endowment and \$31.6M in the quasi-endowment². Like many other institutions, we have experienced a dramatic drop in the value of our investments during the past several years.

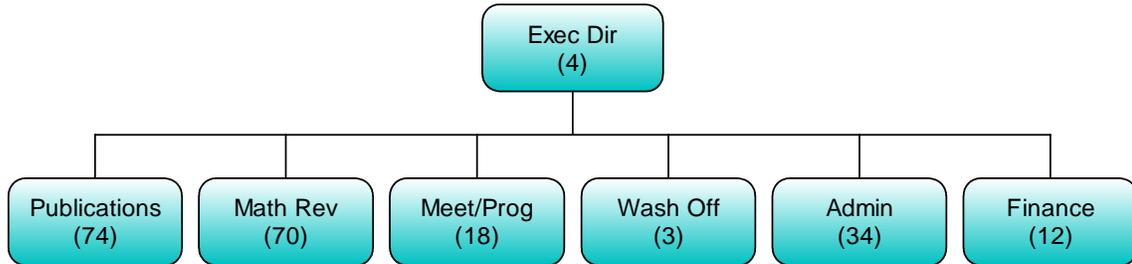
At the start of 2003, the AMS is healthy. Membership is reasonably steady (with some decrease in reciprocity members, however). Publications are scientifically and financially robust. The Society has maintained and improved important services (the Employment Center and survey work) and expanded others (Mathjobs and support for Young Scholars programs). Visibility for mathematics has been greatly expanded, both by our substantial presence in Washington and by the Public Awareness Office. All these things, and many others, are signs of a vigorous organization.

The Society is governed by the Council and the Board of Trustees, an arrangement that separates responsibility for scientific policy and finance between the two elected bodies along with their various committees. The job of the staff is to carry out the policy they set and to ensure that the Society's finances are sound (and remain so in the future).

² The endowment consists of funds that have been given to the Society for specific purposes (for example, prizes), restricting use to the intended purpose. The quasi-endowment consists of reserves—funds accumulated over time for future needs, but without restrictions on its use.

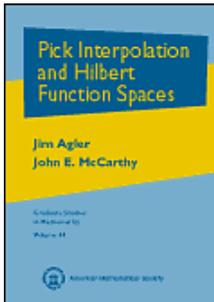
The AMS has approximately 215 employees (down from a high of 250 twelve years ago) who are organized into six divisions. The staff works from four different locations: its headquarters in Providence, a warehouse/printing plant in nearby Pawtucket, Mathematical Reviews in Ann Arbor, and the Washington office.

Six Divisions of AMS

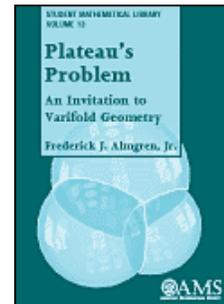


Publications

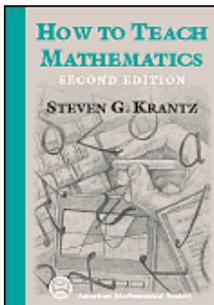
The Publications Division is the largest division at the AMS with approximately 73 employees in six departments. The Society publishes 12 journals and distributes an additional 8 for other publishers. Some are large (*Transactions* published 5,232 pages in 2002), and some are small (*Sugaku* published only 248 pages). Most are published in both print and electronic format. There were 29 new *Memoirs* last year totaling 3,448 pages.



The AMS also published over 100 new books in 2002, ranging from high-level research monographs and conference proceedings to elementary exposition for undergraduates. The Society has more than 3000 titles in print—an incredible



number of titles dating back into the first half of the twentieth century. It also produces a number of "administrative" publications such as the *Combined Membership List*, *Professional Directory*, *Employment Information in the Mathematical Sciences*, and (last year) the *World Directory of Mathematicians*.

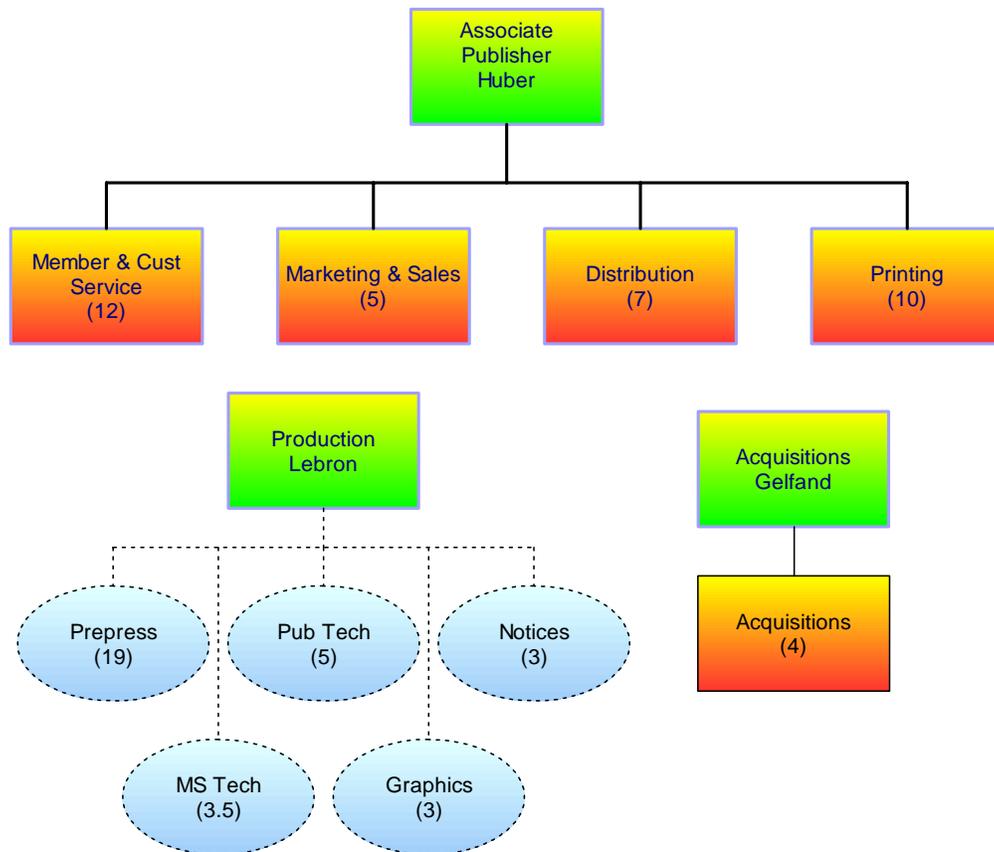


The Society sells all these books and journals to people and institutions around the world, including many thousands of mathematicians, universities, agents, and bookstores. The role of our online bookstore continues to expand, but delivery of scholarly publications is still a complicated business.

When mathematicians think of the publication program, they most often think about acquisitions and production—the departments that deal directly with authors. And indeed these departments include approximately half the staff of the division. But there are many other essential parts of



Publications. Dealing with the thousands of customers, both individuals and institutions, requires a large customer services staff, and marketing our publications requires considerable effort, especially in negotiating and monitoring distribution arrangements overseas. We maintain a large warehouse and distribution center in Pawtucket, Rhode Island, for the distribution of books and journals, and we ship hundreds of orders each day. Many members are unaware that the Society has its own printing and binding facility, designed specifically for the type of book and journal production at the Society. The majority of AMS printing is carried out in-house (although long-run jobs such as the *Notices* are done outside).



At the start of 2002, the Publications Division was reorganized, and the Executive Director now serves as Publisher (heading the division).

Mathematical Reviews

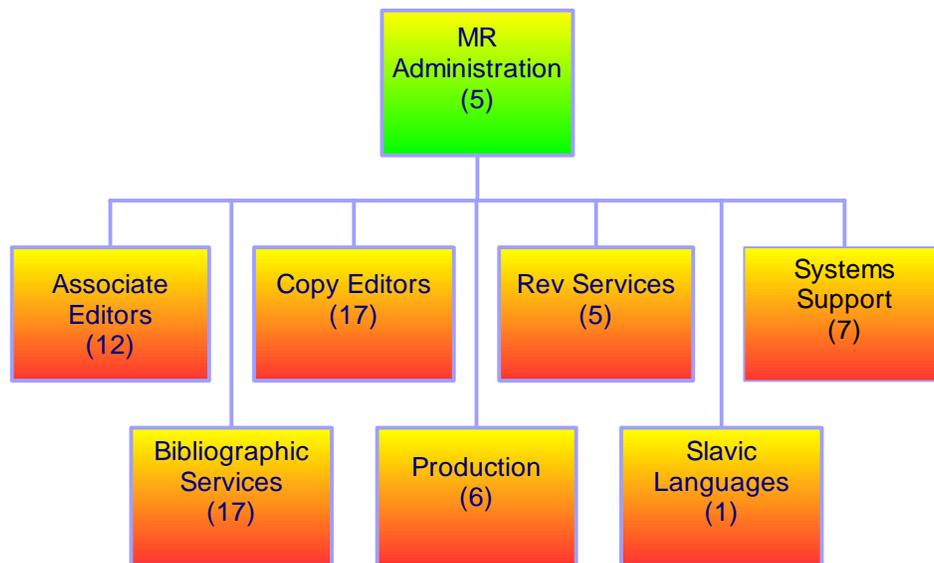
Almost every mathematician knows about *Mathematical Reviews*, a database of more than 1.6 million reviews of mathematics articles and books covering the literature from 1940 to the present. The database includes material from about 1800 journals and nearly 400,000 authors. It now includes links from the reviews to more than 230,000 original articles, allowing users to navigate the online literature, and it contains reference lists (again with links) for papers in approximately 100 journals going back to 1998. The reference lists already include more than 600,000 references.



Mathematical Reviews Building, Ann Arbor

Mathematical Reviews is not a journal—it is a database and the distinction is important. For many years, the large orange volumes sat on library shelves alongside indices that made searching the database possible (often with considerable effort). When the database was put online in 1996 as MathSciNet, it was considerably easier to use. Today, what previously required an afternoon of painstaking work can be done in minutes or even seconds. Even the job of writing papers is easier with the MR-Lookup tools for standardizing and linking references. An online database is a software application.

But while mathematicians use and admire MathSciNet, they often do not fully understand



the effort required to assemble the database and to make it accessible. In order to add the approximately 75,000 new items each year, more than 100,000 articles and books must be scanned. That requires a staff of 70 people in the Ann Arbor office of the AMS, who deal with hundreds of publishers, thousands of journals, and more than 10,000 reviewers. Like any major piece of software, MathSciNet is upgraded once each year, led by staff in

Ann Arbor and including computer staff in the Providence office as well. New tools and ideas for improving the database and its delivery are continually considered. This is a multi-million dollar effort that never stops.

And Math Reviews is like the rest of our publication program: there are many other essential parts hidden from view. Taking orders from customers, shipping the volumes, negotiating licenses for electronic delivery, maintaining access controls, providing help for online users—all are essential to the success of Math Reviews, and all are done by the same departments that do them for journals and books. In recent years, consortia have become an important part of Math Reviews subscriptions. Because of consortia, the number of institutions with access to Math Reviews has more than doubled over the past ten years. Negotiating and maintaining consortia is labor intensive, and it is carried out by staff in the Publisher's office.

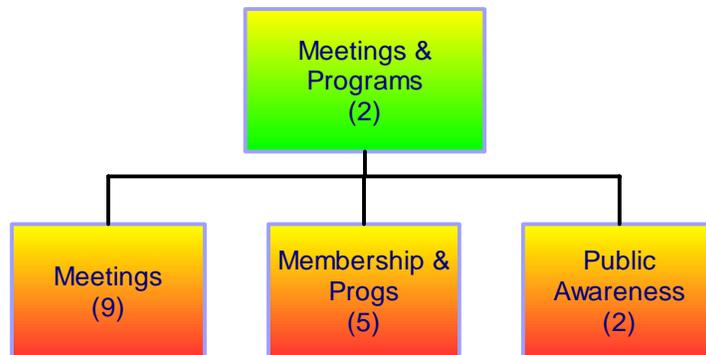


Otto Neugebauer,
Founder of Math Reviews

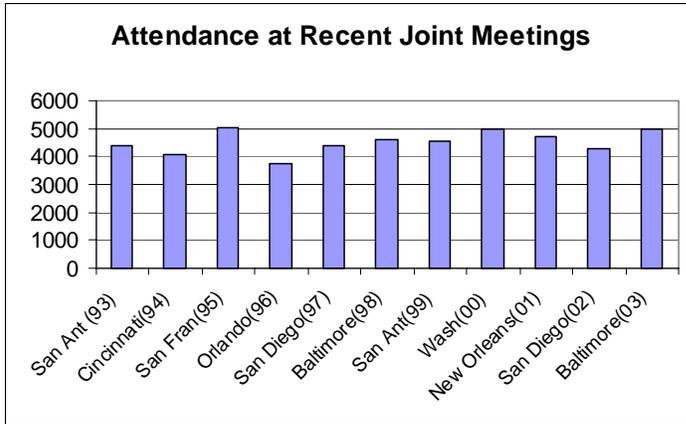
By any measure, Math Reviews is a thriving success—widely thought of as the signature product of the AMS. The Society is justifiably proud of that success.

Meetings and Professional Services

When most people think of a scientific society, they think of the activities done in this division. Holding meetings, cultivating membership, providing services to the community, and promoting mathematics—this is the division that carries out the work of a *membership* society.



The Meetings Department supports one national meeting each year (held jointly with the Mathematical Association of America, as well as a number of other organizations). The Joint Meeting has grown in recent years, and the recent meeting in Baltimore set a record for the number of mathematicians attending. The department also supports eight sectional meetings, one or two joint international meetings, the summer research conferences, and various other functions (such as the Arnold Ross lecture, which is held at a science museum and directed at high school students). In the past few years, we have staffed MathFest in the summer as a sale of service to the MAA. Running a meeting of 5000



people is a tough job; our Meetings Department is known for its professionalism and service.

Membership and Programs has recently taken on the responsibility of "membership development," a task that is separate from day-to-day service to members. This is a department with a wide variety of tasks—the

annual surveys, the Employment Center, the new Mathjobs program, book donations, Young Scholars, the Ky Fan China program, the selection of summer conferences, support for the NSF and NSA postdoc panels, etc. During the current year, this department is also leading an effort to review and plan for future changes in the way we approach membership.

Last year's annual report to the Council concentrated on the Public Awareness Office. In just a few years, this part of the AMS has changed the way we approach outreach beyond our community. There is an increased presence of press at the Joint Meeting in January, and it will be crucial to nurture that increase. *Mathematical Moments* (one-page sheets designed to convey the importance of mathematical research) have been a great success and are widely admired and circulated. The popular *Who Wants to be a Mathematician* game shows have drawn enthusiastic audiences of high school students. The column *What's New in Mathematics* on our website is a wonderful resource. And many written materials, from brochures to newsletters, have explained the AMS to members and non-members alike. The Public Awareness Office is now an integral part of the Society's operations.



Washington Office

The Washington Office of the AMS is just a bit over ten years old, and it's hard to imagine how the Society would function without it. The most important function of the Office is to network with various groups in Washington—Congress and its staff, the agencies, and other scientific societies. Mathematics now has a visible presence in these communities and that presence serves our discipline well. Whether it is a public quote in *Science* by Sam Rankin, the head of our Washington Office, or a private phone call for advice about a pending bill, the many small ways in which mathematics is drawn into the affairs of Washington policy accumulate to a real advantage for mathematics.

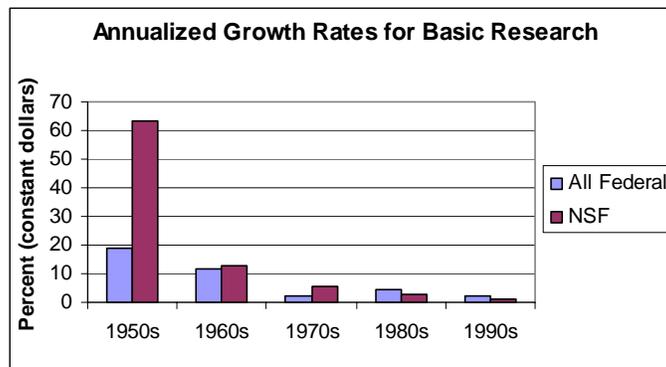


Sam Rankin and Rep. James Walsh, Recipient of 2002 Public Service Award

In addition, there are many other projects carried out by the Washington Office each year, including support for the Mass Media Fellows Program, an annual Congressional Luncheon, the Joint Public Service Award, the Department Chairs Workshop (held at the Joint Meeting), Prize Breakfasts for the winners of the Presidential Awards (for high school teachers), our involvement in Preparing Future Faculty, and several education projects done jointly with the Mathematicians and Educational Reform Forum (MER).



Philippe Tondeur, Ingrid Daubechies, David Eisenbud at 2002 Congressional Luncheon



We do all these things with a Washington Office staff that is nominally three people, but in fact almost always has been two in recent years. Monica Foulkes, Sam's extremely able assistant, will be retiring in 2003; we will all miss her.

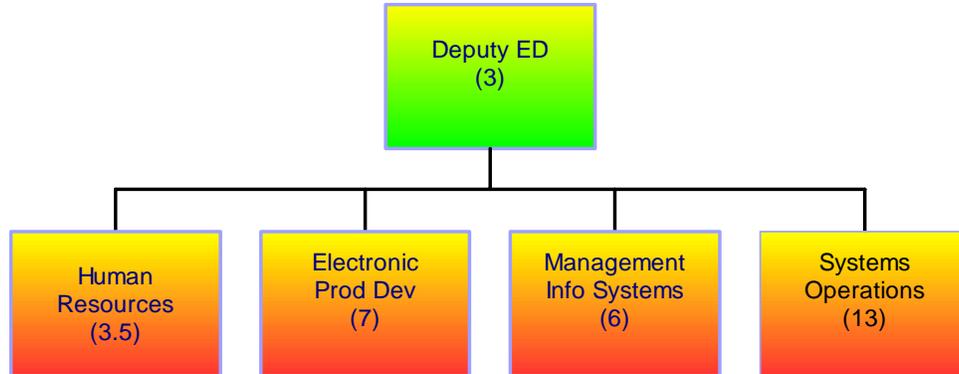
Administration

Administration sounds boring. But running a moderately large organization depends on effective administration for everything from managing employees (the Human Resources department) to coordinating budgets and planning. Development work is carried out by this office in cooperation with the Executive Director's staff. The division is directed by the Deputy Executive Director, who stands in for the Executive Director when necessary.



In our present organization, Administration also contains three of the four computing departments in the Society. (The fourth is at Math Reviews in Ann Arbor.) Electronic Product Development works on projects for *all* other parts of the Society, but spends much of its time on publications related activities. It maintains and updates the AMS website. Management Information Systems supports all the internal computer

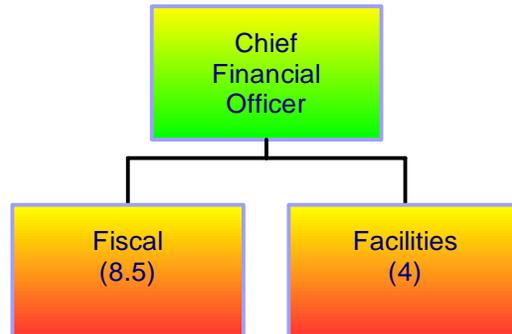
applications that are required by any large business today, integrating our customer database with every part of our operation. Its job is to make information available whenever it is needed—not an easy job in a complex business. Systems and Operations supports the computing environment in our Rhode Island Offices. It does everything from fine tuning our Internet connection (and fending off attacks from the outside) to supporting individual users of office applications. Again, in a modern business, this kind of computer support is crucial.



Finance

This is the other part of administration, and it includes the Facilities Department as well as the Fiscal Department (which deals with every aspect of our finances). This division is headed by the Chief Financial Officer.

The Facilities Department handles all aspects of our buildings and their support in Rhode Island. That includes a sprawling office complex in Providence as well as the warehouse-printing-plant in nearby Pawtucket. People who haven't thought about it are often surprised at what is necessary to maintain large facilities like this—everything from shopping for utilities to installing new office furniture to repaving parking lots to warding off flocks of nesting crows. Purchasing major equipment and supplies for a multi-million dollar publishing operation is a major job by itself.



Hille Conference Room, AMS Headquarters

The Society is a reasonably complicated business for the size of its budget. Because of its diverse activities, from publishing to policy, its finances are more complex than most businesses of its size. Much of its business is international, making those finances even more complex. And the rules

governing financial reporting for non-profit organizations are complicated as well. The Society has developed over the years extremely informative (and accurate) financial reporting.



Dedication of the Radha G. Laha Gardens, AMS Headquarters

Other than the computing departments, our administrative structure is relatively small at the AMS—we view that as a virtue. Many people, especially in academic life, forget about the costs associated with administrative support—for electricity and water, for waste collection, for security at night, for mail delivery, for annual auditors, for legal advice, for workers insurance, etc. In universities, those services are embedded in everyday life and are part of the normal environment; they are easy to forget. In an organization such as ours, however, these are necessary and real ... and someone has to pay for them. This is why journals and books cost more than many expect.

The description above is meant to provide an operational view of the Society. It's not a static view (we move departments from one division to another from time to time), and it does not mention many important activities (in order to keep the description brief). But it is a description that is meant to show how the Society functions, day-by-day and year-by-year, carrying out its work both efficiently and flexibly in order to adjust to changing circumstances. That's something scientific societies must do, easily and often.

John Ewing

