

# Presidential Reflections: Interview with David Eisenbud

Every other year, when a new AMS president takes office, the *Notices* publishes interviews with the incoming and outgoing president. What follows is an edited version of an interview with David Eisenbud, whose two-year term as president ends on January 31, 2005. The interview was conducted in fall 2004 by *Notices* senior writer and deputy editor Allyn Jackson. Eisenbud is director of the Mathematical Sciences Research Institute (MSRI) in Berkeley and professor of mathematics at the University of California, Berkeley.

An interview with AMS president-elect James Arthur will appear in the March 2005 issue of the *Notices*.

**Notices:** *The president of the AMS has two types of duties. One type consists of the things that he or she has to do, by virtue of the office.*

**Eisenbud:** Which is almost nothing, right? The unique duty that's in the Bylaws is to give the Retiring Presidential Address, which I haven't done yet!

**Notices:** *That's true—and still you have been very busy! The first type of duty is what the president is traditionally expected to do. The second type consists of things you do because you are interested in particular issues.*

**Eisenbud:** Yes. Certainly the largest part of the job that *has* to be done by the president is appointments to committees, and that has turned out to be rather fun. [AMS secretary] Bob Daverman and I get together, mostly on the phone. He has a long list of appointments that have to be made, and we talk about how to recruit people who would be interested in the topics the committees are addressing. It's gossip with a purpose.

There is also the Committee on Committees, which helps the president do this, because there are something like 300 appointments a year that have to be made. My first act as president—really as president-elect—was to gather together people who I thought would be very well connected and also who would reach into many different populations of mathematicians. One of my ambitions was to provide a diverse new group of committee members—young people and people from the minority community. I also tried hard to make sure that women are well represented on committees and slates for elections. And I am proud of what we did in that respect. That's actually the largest part of the president's job, in terms of just sheer time and engagement.

Another thing I enjoyed is running council meetings. For a long time I've felt that, if I had to be on a committee, I would prefer to be its chair. I try hard to bring out what people have to say and help them to express it. That kind of facilitator position is one that I think I have become good at and that I like.

**Notices:** *What meetings did you chair?*

**Eisenbud:** The main ones are the meetings of the Executive Committee and the meetings of the Council.

One area that's been of special interest to me is scientific meetings. Of course, MSRI runs lots of conferences, and I am also engaged in the Banff conference center. So I have a broad view of the conference scene and strong opinions about how conferences should be done. I have thought about the AMS conferences, and there are two

things that I have done that I think are interesting and that maybe will have lasting impact. One is the Special Sessions on "Current Events in Math", held at the Annual Meetings, which I organized with the help of an excellent committee. The idea came from a suggestion by Mike Artin. I thought the first session, in 2003, went well; the second, in 2004, was even better. We have a wonderful lineup for 2005 in Atlanta.

**Notices:** *Can you describe the format of those sessions?*

**Eisenbud:** The easiest way to describe it might be to say that it's like the Bourbaki Seminar, but broader and more accessible: broader in the sense that there is more applied math mixed in, because I feel that that sweep of math is part of what's exciting in our field, and more accessible in the sense that the talks aim to be comprehensible to more mathematicians. Each talk is split into two halves; the first part is supposed to be super-elementary and the second also quite accessible. Different speakers have handled this in different ways, and some of the speakers did an incredible job of making topics I considered sketchy for such presentations quite interesting and accessible. In 2003 two out of the four speakers produced writeups, and in 2004 four out of four. [AMS staff member] Raquel Storti produced a wonderful little booklet of them. They will appear in improved form in the *Bulletin of the AMS*, too.

**Notices:** *After you stop being president will you continue organizing this Special Session?*

**Eisenbud:** The session doesn't yet have a long-term structure. My original idea was that after the first two years I would pass it to another chair and committee, but this hasn't happened yet. I certainly do want to give it a life beyond my tenure. By the way, I haven't been doing this alone, by any means. It would not have been nearly as good without the committee that has worked on it. That committee was loosely based on MSRI's Scientific Advisory Committee.

The other conference innovation I've worked on has to do with the Summer Research Conferences [SRCs], which are up for renewal now. Two years in a row we've experimented with a special conference for young people, in which the presenters are mostly pre- and (just) postdoctoral mathematicians. I think it's a niche that's not being filled by anyone else and one that I would like to see the AMS step into in one way or another. I am hopeful that such young people's conferences will play a large role in the grant application that the AMS and SIAM (Society for Industrial and Applied Mathematics) are about to make [for the SRCs], and I hope that application is granted.

**Notices:** *Usually one would want to have established leaders at a conference, but what you're describing is different.*

**Eisenbud:** Here a few established leaders come, and they may give survey talks, but the vast majority of the participants are very young people, just starting out in mathematics. The two conferences were run differently, and both worked well. In one of them, the young people presented their own research. In the other, the senior people decided on five big topics, and the young people ran seminars around those topics with young people as speakers and with a senior mentor in each one.

My model for such young people's conferences was a series of conferences called *Géométrie Algébrique en Liberté* (GAEL) started, I believe, by André Hirschowitz, that take place in Luminy, France. They are organized by and for young people, and the name refers to the fact that they are free of the control of their elders in this. The GAEL conferences have been sponsored by EAGER, the European Algebraic Geometry network. EAGER has just lost its funding from the European Community; I hope GAEL is not jeopardized.

**Notices:** *Bringing in a lot of young people and having them make decisions about what's on the program sounds like a good idea.*

**Eisenbud:** Yes, it's a heady mix, it's exciting for them, and it has worked very well. Also, it is a new way in which the AMS could make itself known to young folks.

Coming back to the AMS itself, some of the other things I've found exciting in this job have been the Washington communications, such as the Congressional Luncheons that the AMS runs every year. Sam Rankin [director of the AMS Washington Office] organizes these. I think they have the potential to have a big effect on Congressional staffers. We have had very good people speak on interesting things connected to mathematics research. It's been fun to connive with Sam in planning these events.

I've also been interested in the structure of the AMS. For example I have begun a discussion—it would be several years before the discussion could possibly lead to any action, since this would require a change in bylaws!—about the structure of the presidential elections. Typically we have a committee that works hard to find two really good candidates. One of them wins the election, and the other is usually rather put out by this—understandably enough. They are both very good people, and either could have done the job well. We often lose someone who is all primed for service and who could do a good job. So my proposal is to make the one who polls



**David Eisenbud**

fewer votes vice-president that year. In the current system we elect a vice-president each year. Why not have the vice-president-elect be the failed presidential candidate every second year? The failed presidential candidate usually polls about as many votes as any vice-presidential candidate. I would like to see that change. There are complexities and ramifications—it's going to be discussed, and I'm sure all these difficulties will be aired. But I think something like that would be a good idea.

**Notices:** *Do you think contested elections are a good thing for the AMS? We have not had them for very long.*

**Eisenbud:** Ten years, a little more. Well, it's mixed. There are people who simply won't serve under those circumstances, and there are people who are quite turned off by losing. On the other hand, I think it's good for the membership to feel that they have some choice, and that it's not just the old fogies on a committee who are making the decision. It gives freshness to the procedure. I think it's a mixed blessing, but I don't propose to get rid of it.

**Notices:** *Maybe your proposal is a good compromise.*

**Eisenbud:** It would make the system a little gentler.

When I was asked whether I would stand for election myself, I had quite mixed feelings—partly because of what we just talked about but, even more, I wondered: how am I going to fit this into my life? I had a sabbatical coming up, I had all kinds of plans about what research I wanted to do. I keep up some research while I am director at MSRI, but it's a struggle. I had mixed feelings about the AMS job because of that, and I think many people who are asked to consider the job of president have similar worries. I would like to record my feeling that, knowing what I know now, I would kick myself if I hadn't said yes to that nomination. It's been quite an interesting experience. I have met people I would not have met otherwise, and have learned about an organization that I think is just marvelous. It functions by and large extremely well. So I am very pleased to have done this job. Not that I'm sorry my term is ending! It's been quite intense, and I have plenty else to do. I have a wonderful successor in Jim Arthur, who has thrown himself into learning about the job, and I think he'll do extremely well.

**Notices:** *One thing the AMS has been considering a lot lately is membership and how to renew the stream of members. Young people who are entering the field don't automatically become members, as they used to.*

**Eisenbud:** When I was a graduate student I remember [Irving] Kaplansky, who was one of my teachers, said to a group of us: "Of course you should join the AMS. It's the union!" People aren't

joining unions as much as they used to, either. But it really is true that the AMS does a lot of things for the community that are just not in the agenda of individual mathematicians, so it's very important for the community that the AMS remains strong. The AMS is also one of the biggest publishers of advanced mathematics books now—it may well be *the* biggest, after the shakedown of commercial publishers. It's a very important organization for the world mathematical community and for the American mathematical community in particular.

**Notices:** *Why aren't young people joining in greater numbers?*

**Eisenbud:** Across our society, professional identity and professional membership have become less important. It's a trend visible in practically every membership organization. Within our particular community, I don't know if there are special forces. The AMS has been studying this problem and trying to understand better what members want and how the Society can be of use to members, and I think there will be several initiatives appearing soon. The Membership Department is working hard to make AMS membership per se more valuable. A problem, in a way, is that the AMS is so community-spirited: the idea of making some benefit *not* available to the people who are *not* members is painful. For example, very few societies make the membership list available to everybody without being members. Very few societies make the most-read journal, which is our *Notices*, available to everybody without being members. Making those things freely available may not be in the self-interest of the Society, but at least in the short run it is good for the greater mathematical community. It is good in the long run too unless it damages the Society, whose well-being is good for the mathematical community in many ways. A new balance may have to be struck between these needs.

**Notices:** *Any thoughts on the future role of the AMS?*

**Eisenbud:** The future looks bright to me; there is a huge amount going on. I think the AMS core staff—John Ewing and Bob Daverman in particular—are wonderful, and it has been a great pleasure to work with both of them, and I admire them a lot. I really enjoyed working with each of them in different ways and learned a lot from them. And with Sam Rankin too, concerning advocacy for mathematics in Washington. All the mathematics organizations are in there pitching, and the AMS is one of the leaders. I think the Society is in good hands and will continue to be. There is a huge pool of talented and committed people the Society draws on. That impressed me a lot, how seriously people take their role in the AMS and how willing they are to spend time on committees and such, making sure the AMS functions well.