

Job Market Brightens for Applicants



Scene at the AMS Employment Center, New Orleans, January 2001.

“Four years ago, people were so gloomy” about job prospects, recalled Robert Pollack, who this year will finish his Ph.D. in mathematics at Harvard University. He remembered sitting at that time with a group of graduate students and postdocs, one of whom predicted that in four years half of them would have left mathematics. Such predictions were part of the lore of graduate school in mathematics during most of the 1990s, a time when many new and recent doctorates faced a crowded, intensely competitive job market. But those like Pollack who stuck it out are finishing their degrees under quite different circumstances. Over the past two or three years the job market in mathematics has improved dramatically for applicants. Employers are watching with concern as numbers of applications decrease, but they too seem more satisfied, for the easing of the job crisis has translated into a higher proportion of suitable applicants.

The numbers of employers and applicants participating in the most recent Employment Center (formerly known as the Employment Register), held at the Joint Mathematics Meetings in New Orleans in January 2001, tell one part of the story. The Employment Center provides a venue for brief interviews between employers and applicants during the meetings. According to Diane Boumenot, the AMS staff member who manages the Employment Center, there were 53 employers and 499 applicants in 1996. This year there were about 150 employers and about 340 applicants. Boumenot said she ran out of space to accommodate all the employers who wanted to participate and had to make

special arrangements for fifteen of them to use a spillover room. The lack of space was partly due to the inadequate size of the Employment Center room in New Orleans, she noted, but such a room would have sufficed a few years ago. Boumenot also reported that some employers had nervously told her about large declines in numbers of applications. For the first time in her ten years of working on employment matters, Boumenot heard of employers telephoning the AMS to ask why, after posting a job on e-MATH, they had received no responses.

Tom Rishel of the Mathematical Association of America reported another indication that applicants are having an easier time this year. At the last five Joint Meetings he organized panel discussions for job seekers about the nuts and bolts of the job search process, such as how to prepare a résumé and what to expect during an interview. Five years ago, he said, more than 200 people packed the room. In New Orleans, however, only about 30 people attended, and judging by the average age of the audience members, many were probably employers. One reason for the low attendance may be that, because of the past difficulties of the job market, the mathematical organizations have made available a great deal of information on job search strategies (see, for example, the Web site <http://www.ams.org/employment/>). Nevertheless, if the sense of desperation that existed in 1995 had persisted in New Orleans, the session would have been packed. Indeed, Rishel said, only half jokingly, that “next time we may switch to a panel for employers.”

Generally, job seekers participating in the Employment Center seemed optimistic about their chances of landing a job they would like. Stories circulated about people easily lining up thirty Employment Center interviews. One applicant who filled her schedule with about 35 interviews was so much in demand that one employer approached the applicant’s thesis adviser to try to get a foot in the door with the adviser’s sought-after student. At the other end of the hiring spectrum, there are indications of a decline in the numbers

of applicants for jobs. Scott Nollet has been on the job market several times since receiving his Ph.D. in 1994 and last year landed a tenure-track position at Texas Christian University. He used to receive letters from employers saying things like, "You are one of 750 applicants...", but in the last couple of years the number has dropped to 300 or 400. "The prospective employee can cast a smaller net," he noted. Job seekers also seem to be turning away from undesirable positions they might have considered five years ago. One anecdote told of a one-year position with a high teaching load that drew just eleven applicants.

Don Lawrence of Ithaca College, who used the Employment Center this year and also in 1997 and 1999, looked upbeat and relaxed in New Orleans. Job seekers often send out applications in advance of the Joint Meetings and then arrange Employment Center interviews with the places they applied to. Lawrence said he had not applied in advance, yet he landed ten interviews at the Employment Center, and a number of those seemed quite promising. In recent years, not applying early and often might have been disastrous. But this year job seekers seem to feel far less pressured, and they are being more selective in where they apply. A handful of conversations during the Joint Meetings suggest that most job seekers sent out forty to seventy applications. According to Lawrence, one job seeker was teased for doing what everyone seemed to be doing five years ago: sending out 200 applications.

With fewer panicky job seekers blanketing the market with applications, employers also seem more satisfied. Richard Wilders of North Central College, near Chicago, said he had interviewed the same number of people at the Employment Center this year as last year, but this year he had more candidates who looked promising. "Folks are focusing more on places where they have a good fit," he remarked. He also noticed that job applicants seem more interested in finding jobs they would want to keep for a while; fewer job seekers find it necessary to put up with moving from place to place year after year. In addition, Lawrence noted that there seemed to be more tenure-track positions offered at the Employment Center this year than in past years.

Many noted the impact of the World Wide Web on the job search process. Because most colleges and universities have Web sites, applicants nowadays have a much easier time investigating the places they apply to. This enables applicants to rule out places that are unsuitable and also to prepare better for interviews. Mohamed Ben Rhouma, currently a postdoc at Georgia Institute of Technology, said that he was able to find a great deal of information on the Web about the approximately forty schools he applied to. "I can download information about the whole school and about the mathematics department and then e-mail people to get additional information," he said. Indeed, it

seems that examining the Web sites of mathematics departments helps job seekers to think of questions they would like to ask about the schools they apply to, allowing them to take good advantage of the important interviewing technique of asking informed questions of the employer.

Just as it was hard to tell exactly what caused the harsh job market of the 1990s, it is hard to tell what is causing the recent improvement. The second report of the 1999 Annual Survey (*Notices*, September 2000, pages 886–904) shows that the worst years for job seekers were 1993–96, when unemployment rates among new doctorates in mathematics rose as high as 10 percent. Since then the number of mathematics graduate students has declined, but not the number of new Ph.D.'s. What has changed, though, is the number of positions under recruitment. The low point was in 1994, when, according to the survey, there were about 1,100 open positions; by 1999 that number had risen to about 1,500. Indeed, it was common to hear at the New Orleans meeting remarks like that of Alejandro Adem, chair of the mathematics department at the University of Wisconsin at Madison, who put it succinctly: "Everyone is hiring." The survey also indicates that the number of retirements has risen in recent years. Another influence is the National Science Foundation program called VIGRE (Grants for the Vertical Integration of Research and Education), which began in 1998. In the current academic year the NSF is funding about 130 VIGRE postdoctoral positions. Because the NSF requires that the VIGRE postdocs have a low teaching load, departments continue to need to hire people to cover teaching duties. Finally, the booming economy eased constraints on college and university budgets and also widened job opportunities outside academia.

Having observed the job crisis of the 1990s and the brightening outlook at the turn of the millennium, Boumenot said that she believes she could recognize some of the telltale signs that might indicate a downturn, such as large cuts in state education budgets. But, she hastened to add, "The AMS is out of the prediction business." Indeed, it is probably impossible to predict what will happen in the next few years. Those whose careers straddle the turnaround in the job market are keenly aware of the uncertainty. Pollack was probably not alone when, referring to the job market, he asked, "Four years from now, will it be gloomy again?"

—Allyn Jackson