

Jane Kister Appointed Executive Editor of *Mathematical Reviews*

"I don't come from a mathematical family," says Jane Kister. "At least, not until recently." Her father was a lawyer and then a judge until he retired at the age of seventy-five. At that point he took up mathematics and began working his way through an undergraduate degree in the subject at the Open University in the United Kingdom. He is now eighty-one. "He hopes to graduate in a couple of years when he has enough credits," says Kister. "I'm extremely proud of him."

And no doubt he is proud of his daughter. In July of this year Kister moved into the top post at *Mathematical Reviews*, that of executive editor. Beloved by the staff of MR's Ann Arbor office—and by many in the AMS Providence headquarters as well—Kister brings to this position experience and expertise that are hard to beat. Having worked at MR for nearly twenty years, she has shown her father's dedication and perseverance in mastering all facets of the MR operation. She succeeds R. Keith Dennis, who finished his term in July and will return to Cornell University in the fall.

Kister received her Ph.D. in mathematical logic from Oxford University in 1972 (she was a student of Robin Gandy, which makes her a mathematical granddaughter of Alan Turing). In 1978, known by her maiden name, Jane Bridge, she held a tenured faculty position at Oxford University and had no intention of leaving until she met and married University of Michigan topologist James Kister. As with many women mathematicians, her personal circumstances influenced her career path, and in 1979 she became an associate editor at MR. In 1984 she moved up to the position of associate executive editor.

When Kister first came to MR, it had been publishing around 30,000 reviews per year and was only just starting to develop means of electronic delivery. Today she oversees an operation that will process at least 65,000 items in 1998 and makes reviews available through several different media, including the World Wide Web product MathSciNet. "MathSciNet has revolutionized the way people use the MR database," says Kister. "In part because they have access at their own desks, more people are accessing MR, and they are doing so more often than they did when only paper was available." One question that arises is whether the availability of MathSciNet is causing people to use the MR database in new ways. Kister plans to investigate this question through a survey and to use the survey results to assess what enhancements might be the most useful. Changes in how people use the MR data might also argue for changes in editorial procedures. For example, a great deal of effort has been put into making the reviews grammatically as well as mathematically correct. However, because MathSciNet includes links between



Jane Kister

reviews and is starting to include links from reviews to original articles that are available on the Web, it may be more important to make sure the references are appropriate and, of course, 100 percent accurate. "We will try to do both," she says.

The electronic delivery of MR has come a long way, but the production and acquisition process

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remains tied to paper. "The production pipeline has been honed over the last almost sixty years," says Kister. "It works extremely well, but it is based on paper: paper copies of original items and paper review manuscripts." Even reviews that arrive electronically are printed out for processing, for this is the simplest way to fit them into the current production scheme. Kister says that one of the main priorities for MR over the next few years is to develop a production pipeline that allows for electronic processing and editing. The lack of good online editing tools—whereby changes can be indicated by one person, checked by another, and implemented by a third—has been an obstacle. In addition, MR would like to develop a system whereby reviewers of papers that appear in electronic journals can obtain papers electronically,

either on the Web or in e-mail.

Another task for the AMS is to improve the on-screen appearance of MathSciNet. Currently, mathematical symbols and formulas are initially displayed in raw \TeX coding, so that, for example, instead of seeing the symbol π , one would see $\text{\$}\pi\text{\$}$. Reviews may be retrieved in DVI format, and this summer, the AMS hopes also to offer PDF viewing capability on MathSciNet. However, both PDF and DVI are temporary measures. What is really needed is a genuine language for the efficient display of mathematical symbols and formulas in Web documents. Math Markup Language (currently under development by a committee that includes MR associate editor Patrick Ion) will provide exactly that. Says Kister, "I've great hopes that Math ML will become the standard way to display math on the Web."

Although MathSciNet has been very successful, it has not meant a financial windfall for MR. The way MR products are priced permits support but not expansion of the operation. What this means is that MR continues to operate with a cap of about 50,000 reviews per year, despite an unexpected increase in the last few years in the amount of mathematical literature. "It had been more or less constant, and we were lulled into a false sense of security," Kister notes. In 1991 *Current Mathematical Publications* (which indexes mathematical literature with bibliographic information, no reviews) carried about 55,400 entries; this number grew to 62,000 last year, and estimates for 1998 are running at 65,000 to 67,000. The increase seems to be due to a combination of factors, including a rise in the number of mathematics journals. "Because of pressure on library budgets, we need to find ways to continue comprehensive coverage without significantly increasing our expenses," Kister says. "We will be looking at ways to cut production costs as we redesign the production stream, but we may want to make some editorial changes as well."

The explosion of electronic publishing technology means that MR has a promising if somewhat unpredictable future. Amid all the changes Jane Kister does not intend to lose sight of MR's core mission. She says, "My first priority is to make sure that MR goes on doing what it has done so well: producing a high-quality database of reviews and listings providing comprehensive coverage of the mathematical research literature."

—Allyn Jackson