MathSciNet Matters

The "MathSciNet Matters" column appears in the *Notices* several times a year. It includes information on new features of MathSciNet and on the underlying Mathematical Reviews Database, together with tips on how to use MathSciNet to make the most of its richness of structure and content.

The MR Citation Database. The September 2005 release of the new version of MathSciNet introduced several new features. The most significant is the MR Citation Database (http://www.ams. org/mrcitations/search.html). This new database is built upon the matched items in the reference lists that have been added to the MR Database for selected journals since 2001. An attempt is made to match each item in each reference list with an item in the MR Database, using a batch version of the reference matching tool MRef (the interactive version is at http://www.ams.org/mref). Matches are found on average for 85% of all references. Each day 1% of the unmatched items are examined again. The rate of successful matching varies by area. For example, many citations to applied mathematics papers are in journals that are not covered by MR.

Two ways to search the Citation Database are offered. The first is a search by author. Every Math-SciNet author with at least one matched reference is included in the author portion of the Citation Database. Up to ten of the mostly frequently cited items are listed, together with the total number of citations for the author in the citation database. Another count given is the total number of distinct MR Database authors associated with items citing the given author. These numbers give a clear impression of the way mathematics disseminates through the community over time.

The second way to search is by journal among the matched references. The results are keyed to a specified year. For example, how many citations in 2004 reference list journals were made to papers in the given journal in the 5-year range 1999–2003? A bar chart presents all the citations to the given journal in 2004, in 5-year intervals, back to 1900. The bar charts show the "staying power" that mathematics has, a point that is frequently made in various policy discussions.

By September 2005 the number of journals with MathSciNet reference lists had grown to 195. By the time this is published the list will have grown to 325. The list of journals can be found at http://mrweb.mr.ams.org/mrcitations/ journal_list.html.

Reference Citations in MathSciNet. The October 2005 column discussed the reference checking tool MRef, offered by the AMS at no charge. For matching of references in reference lists to the MR Database this tool is run "untouched by human hands" in order to make the matching of reference list items economically feasible. While the overwhelming majority of matches (and failures to match) are correct, errors are possible. MRef can fail to match based on the similarity of two or more items, for example, various editions of a book. MRef requires a unique match, so ambiguous cases return no match. It can in some cases return an incorrect match. A special case involves preprints and other unpublished material. Because many of these references will become published over time, special rules (involving fewer criteria) are used to allow matching with unpublished material. These matches are tagged with *cf.*, which serves as a little warning. The *cf.* matches are counted just like the unambiguous ones in the Citation Database. There are a number of caveats, in addition to these issues, that need to be understood before venturing any interpretation of the data returned from the MR Citation Database (see further http://www. ams.org/mrcitations/help/citation_ database_understanding.html).

Reviewers Corner. A new interface to the submission of reviews on the Web is now available. The address is the same as always: http://www.ams. org/mresubs. However, you will now see a new AMS Web Sign In link at the upper left of the page. Clicking this link and entering your username/password will connect you to all your reviewer information, including paper and email addresses, current AMS Points total, reviewing classification list, and reviewing interests. We would like you to review your list of classifications and your interests periodically so that we can do the best possible job of sending you items that match your research and reviewing interests. The new page makes it easy to update those classifications and interests. If you proceed to submitting a review after signing in, you will find all your personal information fields already filled in. The Web submission of reviews has brought a measurable increase in efficiency. We hope that the new interface will be helpful to those reviewers already submitting on the Web and more enticing to those who have not yet done so. The majority of reviewers already have an AMS Web Account for logging in. If you don't have one, it is very simple to register and create a profile that includes your reviewer number.

> *—Norman Richert Mathematical Reviews*