14.1.21 MathSciNet

MathSciNet is an important international database in pure and applied mathematics, published by the American Mathematical Society since 1940. It contains bibliographical data and extensive reviews on articles which are published in approximately 1800 current journals. In addition it also lists monographs, articles in conference proceedings and collections of articles. There is an annual increase of about 70.000 records.

Accessible to: 50 Univ. (Phase I)

Coverage: 1940 onwards

Search

Searches can be conducted in several ways:

- 1. Name of author
- 2. Title
- 3. Mathematics Subject Classification (MSC 2000)
- 4. keywords or phrases, which are included in the title, reviews or abstracts.

Select Search by Field

Enter search criteria by selecting any field listed under search terms. Initially the cursor is in the blank text input box next to the first Field Name box displayed on the screen. Enter your search criteria. Continue this for each Field Name that you wish to search on. Leave the text input boxes blank next to any fields you are not using.

Boolean Operators

Boolean operators that can be used in MathSciNet are: AND, OR, NOT. Boolean operators may be entered in the text input boxes and selected from the pull-down menus located between Field Names. For example, entering **modular** in the **Review text** field in the top text box and **variety** in the **Review text** field in the second box, and selecting AND as the Boolean operator, will match all MathSciNet items that contain both *modular* and *variety* in their review text, in any position and order.

The evaluation of Boolean expressions follows the precedence rule of AND and NOT before OR. Parentheses can be used inside text input boxes to override this precedence. There are implicit parentheses around the entire contents of each text box. NOT is really "AND \sim ", where \sim is the (logical) unary negation operator, which is evaluated first, on the right argument. (\sim is not a MathSciNet operator.)

Search Criteria Containing Mathematics (TeX)

You may search for strings that include TeX coding. TeX special characters, such as "\", "&", and "\$" are replaced by white space both in the search string and in the target, so their use is optional. For example, searching for "h 3", and "\$h 3\$" produces the same results, which include "(H)=3", "H/(3", and "\$H\$, (3)". (White space can be any number of space characters.)

lications Authors	Journals Author Citations	Journal Citations	
earch Terms			
Author	modular	and 💌	
Author Author/Related	variety	and 💌	
Title		and *	
Review Text			
Journal Institution Code	L		
Series			
MSC Primary/Secondary			
MSC Primary	Publication Tur		
MR Number	G All C Dealer		1995 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -
Anywhere	All + Books	S Journals Proceeding	5
References	- <u>10</u>		
Year Range: t	ō		

Select a time frame

Select the radio button for the option desired. The options are as follows:

Author	s Journals Author C	itations Journal Citations
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- **Publication Year Ranges** You may set your search to look for items with a Publication Year **less than**, **equal to** or **greater than** a specific year. Alternatively, you may also specify a year range, with inclusive lower and upper year bounds. Each year used must be input as a four-digit number, e.g. 2004.
- Entire Database This option is selected by default. It performs a search of the entire database, which spans 1940 through the present, together with certain

historical journal runs (items dating back to the late 1800s are listed in the database). You must enter at least one other search criterion.

Select a document type

Authors	Journals	Author Citations Journal Citation	ns
and Terms			
Author	•	and	
Title	•	and	
MSC Primary	E	and	
Anywhere	-		
Search Clear			
Time Frame		Publication Type	
Entire Database	_		Proceedings
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The MathSciNet database contains information about the publication format of the original document. By default, all types of documents are searched. To refine a search, a single document type may be specified. Click the radio button next to the option desired. The options are as follows:

- Books
- Journals
- Proceedings
- All (the default)

Author or Journal Search

Search the database in the name of a specific 'Author' or 'Journal'. For searching the name of an author click on the author tab above the search screen.

ublications	Authors	Journals	Author Citations	Journal Citatio	ns	
Author Na	ime					
Example:	Hilbert, D*					
Search						

For example the screenshot below shows the search result for the Author 'Gilbert, C.' . By clicking on the author name it shows the publications of the author, collaborator authors etc.

AMERICAN MATHEMATICAL SOCIETY	Home Help Su	upport Mail
MathSciNet Mathematical Reviews on the Web Author:	Gilbert, C.	Search
Matches: 3		
Author results for "Gilbert, C." Expand All Collapse All		
Gilbert, C. Gilbert, Christie L. Gilbert, Christopher L. View Publications Refine Search Co-Authors Collaboration Distance Matches: Collaboration Distance Make Link O Copyright 2 Privacy Stater Privacy Stater Privacy Stater Privacy Stater	2008, American Mathema ment	atical Society

Citation Reports

MathSciNet database also provides the citation reports for individual authors and journals. To view the citation reports click on the Author Citations' or Journal Citations' tab on the above screen.

ublications Authors Journals Author Citations	Journal Citations	
Journal Enter a journal abbreviation, journal name, partia	l name, or an ISSN	
Citing Year		
Citing Year 2006 • Search		
Citing Year 2006 • Search		Top 10 Lists

Screen shot given below display citation information of journal International Journal of Applied Mathematical Sciences.

	2005 Citat to Int. J. Appl. A in the MR Citation	tions Math. Sci. Database	
6	Mathematical Citation Q	uotient for 2005	
Year	2005 Citations to Journal	Items Published in Journal	MCQ*
2004 2003 2002 2001 2000	0 0 0 0 0	0 (0% cited) 0 (0% cited)	
	0 citations 🕂	0 items 🗧	0.00

Set your preferences

To set your preferences, select Preferences from the tool bar at the top of the screen. The following choices are offered:

ferences				
Peadlines per page © 20 © 50 © 100	Display Reference Lists • Yes • No	Headlines • Full • Simple	Oisplay DML Items	
Site to search Providence, RI USA Save	Language F English •	F ont Face ® Sans Serif [©] Serif	Con Coff	

- > Number of headlines per page. The default is 20.
- > Display reference lists or not. The default is yes.
- Full or simple headlines. The default is full; simple headlines list only the MR number and the bibliographic data while full headlines also include the MSC classification numbers and reviewer name as well as links to the article, journal and clipboard.
- Display contributed items or not. The default is yes; contributed items include items published before 1940, when Mathematical Reviews began, and also more current items that may not have been added to the database through the normal editorial process.
- Which mirror site to search. The primary server for MathSciNet is in Providence, RI USA. Mirror sites are located at Houston, TX USA; Rio de Janeiro, Brazil; Bielefeld, Germany; Bonn, Germany; and Strasbourg, France.
- Language interface. A selection of languages is offered for the presentation of the MathSciNet search screens and error messages; the choices are English, French, German, Chinese, Spanish, Russian, and Japanese. Depending on browser and version, it may also be the case that the switch in languages is made automatically by a browser preferences primary language setting.
- > Sans serif or serif font face. The default is Sans serif.

After selecting your preferences, **save** them and close the preferences window. MathSciNet will remember these.

Activate the search

Once all desired search criteria have been entered, click the *Search* button. Search results are displayed as a headline list of bibliographic data that matches the search criteria. From this screen, full items can be selected for display. If a search results in a single item, the corresponding full item is returned, rather than a headline.



Sort Order

MathSciNet results are in most cases presented in the following order:

- By reverse order of publication year of the original item
- Within publication year, by reverse order of the date on which the item was entered into the Mathematical Reviews Database.

The exception to this order occurs when a headline list is obtained by clicking on a journal issue: from a headline list, from a full item, or from a list of journal issues obtained in Search the Journals Database. The resulting headline list displays all items in the MR Database taken from the chosen issue of the given journal, ordered by first page number for journals issued with consecutive paging. As a result, the items appear in table-of-contents order.

Bibliographic Citation(s)

Each headline item displays the following bibliographic information: MR Number, Author Name(s), Title, Journal, Volume, Publication Year, Issue, Paging, Translation Journal and Issue (when applicable), Series and Mathematics Subject Classification (MSC). Some items may be listed as Database Expansion Items.

MR Number

The MR Number is a number (or pair of identifiers) used to uniquely identify a specific record in the Mathematical Reviews (MR) Database. Every item in the database has a seven-digit accession number, and some items also have an additional identifier in parentheses following the seven-digit number, for compatibility with the paper publication Mathematical Reviews. (See MathSciNet Field Help for additional information about the MR Number.)

Click on an MR Number from the headline list to display the full item.

Example: seven-digit number - <u>MR1909785</u> or seven-digit number with additional identifier Number - <u>MR1883032 (2002k:13024)</u>

Author Name(s)

Names are displayed in the bibliographic information as: lastname, firstname, middlename or initial(s). Click on an author name to retrieve a headline list of all papers by that author.

Example: Novikova, N. M.; Pospelova, I. I.; Semovskaya, A. S.

Title

The original title of an item is given if it is in English, French, or German. If the item is a paper, only a translated title is provided for languages other than English, French, or German. If the item is monographic, the original title (or its transliteration) is given, with an English translation.

Example: Canadian Journal of Mathematics: 1949--95



Journal

In MathSciNet, full or abbreviated journal names are available for all items from 1980 to the present. Prior to 1980 only journal name abbreviations are included.

Click on a journal name to retrieve bibliographic information about that particular journal, including full name, issues per year, publisher, and ISSN number. In addition, links to lists of indexed items in issues of that particular journal are presented. (See MathSciNet Field Help for additional information about journal names.)

Journal Information for "Communications on Pure and Applied Mathematics"	
Comm. Pure Appl. Math. Communications on Pure and Applied Mathematics Wiley 111 River St. Hoboken NJ 07030 ISSN: 0010-3640 E-ISSN: 1097-0312 CODEN: CPAMA 12 Issues/vol./yr. Indexed cover-to-cover Status: Current http://www3.interscience.wiley.com/cgi-bin/jtoc/29240/	
List Journal Issues	

The issue number links to a headline list of indexed items from that issue. If there is no issue number, the year will be a link to the list of indexed items. The publication year can be used as a search criterion on the full search screen.

Example: 40 (2000), no. 10, 1451--1463

Links to Original Documents

From the headline list, there may be links to the original document depending on what is available for that document. Links may be to an original article, a journal homepage, or to the document delivery service.

Article: This link is displayed below a headline item. It links directly to the online article at the publisher's or journal's Web site. Access to the full text of an article is dependent on your having a subscription to the journal. In some cases, the abstract for the article is available without a subscription. A current list of journals is available from the MathSciNet Journal Search and Current Journal Issues pages.

Journal: This link is displayed below a headline item. This link is active when a link to a journal homepage is available. Access to the full text of an article is dependent on your having a subscription to the journal. In some cases, the abstract for the article is available without a subscription.



Retrieving Full Item(s)

The MathSciNet database provides many options for viewing full items. Full items can be displayed individually and in groups. They can also be viewed in various formats.

Displaying Full Items Individually

Full items can be viewed in HTML, PDF, PostScript and DVI formats. Viewers are required for all formats except HTML.

To view a full item in HTML format, click on the MR identifier for the item to be displayed. Viewing a full item in HTML format will provide you with active links to other data.

MathSciNet Mathematical Reviews on the Web	117 Sec. 1111
Select alternative format	Previous Up Next
MR2338529 Cottrell, D.(3-MGL); Tupper, P. F.(3-MGL) Energy drift in molecular dynamics simulations. (English summary) BIT 47 (2007), no. 3, 507523. 37M15 (37M05 65Dxx 70Hxx 81V55) PDF Doc Del Clipboard Journal Article Make Link	Citations From References: 0 From Reviews: 0
{A review for this item is in process.}	
References	
 M. P. Allen and D. J. Tildesley, Computer Simulation of Liquids, Oxfor 1987. G. Benettin and A. Giorgilli, On the Hamiltonian interpolation of near mappings with application to symplectic integration algorithms, J. St 11171142. MR1268787 (95b:58055) P. Billingsley, Convergence of Probability Measures, John Wiley & So MR1700749 (2000e:60008) G. Ciccotti, D. Frenkel, and I. R. McDonald, eds., Simulation of Liquid Dynamics and Monte Carlo Methods in Statistical Mechanics, North-F D. Cottrell, Symplectic integration of simple collisions: A backward e theorie. MCCill University, 2004. (www.math.medill.co.(D) Simplectic. 	rd University Press, Oxford, to-the-identity symplectic tat. Phys., 74 (1993), pp. ns, Inc., New York, 1999. ds and Solids: Molecular Holland, Amsterdam, 1987. pror analysis, Master's

User profile

To create a user profile, click the **Sign In** link located at the top right hand corner of the page. You may then create a customised search page by changing the drop down fields and selecting those of most use. To save your selection, click on the **Save Profile** link at the top right hand corner of the page.