

Mathematics information resource guide

Introduction

The Moore Library

The Moore Library houses the current working collections of the University Library in mathematics (both pure and applied), mathematical statistics, physics and allied physical sciences. The Library acquires material to support both research and teaching activities in these subjects.

Other mathematical libraries in Cambridge

A large collection of older mathematical material is retained at the main [University Library](#) building on West Road.

The [Isaac Newton Institute for Mathematical Sciences](#) maintains its own [library](#). Reference access to this library for non-Institute personnel may be granted at the discretion of the Institute Librarian.

College libraries vary in their level of provision, but most contain at least some mathematical texts to support the undergraduate mathematical tripos.

Help and advice

Advice on the use of the Library, its collections, or any information-based issue may be obtained from the Library's subject specialist staff, who can be contacted on (01223 7) 65676/7 or moore-library@lib.cam.ac.uk. Wendy Sawford (65672, was1000@cam.ac.uk) has particular responsibility for mathematics.

Joining the Moore Library

The Moore Library admits all students and senior members of the University, and other persons in possession of a valid University Library or Medical Library card.

Outside staffed hours, access to the Library for reference purposes is provided to holders of University Cards that have been validated for 24-hour access.

Registered readers eligible for 24-hour access are:

1. Undergraduate students
2. Postgraduate students
3. Senior members of the University and research staff

Please note that all persons admitted to the Library are required to register as readers. Reader registration and card validation for 24-hour access must be done in person between 0930 and 1630 Monday - Friday.

Arrangement of print collections

Classification

Books and journals in the Library are shelved according to the Library of Congress (LC) classification scheme, an alphanumeric system in which the major subject divisions are allocated a single or double letter code between A and Z. Books are fully classified, while journals are just given a one- or two-letter classmark and then arranged alphabetically within this by title.

Broad mathematics-related areas include:

Algebra, Number Theory, and Set Theory	QA150 - QA272
Analysis (including Numerical and Functional)	QA297 - QA433
Astronomy and Astrophysics	QB
Computing	Q300 - Q336 and QA75 - QA76
Electricity and Magnetism	QC501 - QC766
Finance	HG
Geometry and Topology	QA440 - QA699
Geophysics	QC801 - QC849
Logic	BC and QA9 - QA10
Mathematical Physics	QC20
Mechanics	QA801 - QA939 and QC120 - QC168
Meteorology and Climatology	QC851 - QC999
Nuclear and Particle Physics	QC770 - QC798
Optimization and Operational Research	QA402 and T57
Probability	QA273 - QA274
Quantum, Atomic, and Statistical Physics	QC170 - QC220
Statistics	HA and QA275 - QA299

Catalogue searching

To find items within the Moore Library (and simultaneously the University Library and its other dependent libraries), search using [Newton](#).

A wide variety of search options are provided (see [online help](#) for details), but the three basic types described below will enable you to find most things you want.

Journal Title Search

You want to find the journal article given in the reference:

Alfred Witkowski

[5] *Optimal weighted harmonic interpolations between Seiffert means*, *Colloq. Math.*, 130, no. 2 (2013), p. 265–279.

Individual articles within journals are *not* separately catalogued, so you need to look for the journal as a whole and then check whether or not the volume you need is held by the Library.

Use the 'Basic' search option, and select 'within Journal title'.



The screenshot shows a search interface with two tabs: 'Basic' (selected) and 'Advanced'. In the top right corner, there is a 'Search History' link with a magnifying glass icon. The search area contains a text input field with 'Colloquium math', followed by the word 'within' and a dropdown menu showing 'Journal title (omit 'The' & other leading articles)'. Below this, there is a 'Limit To:' dropdown menu set to 'none', and a 'Records per page:' dropdown menu set to '25 records per page'. A 'Search' button is located at the bottom right of the search area.

Type the *beginning* of the journal title into the box, and click on 'Search'. [As in this example, journal titles are often abbreviated in references. If you don't know what an abbreviation stands for, try looking it up in Alkire's *Periodical title abbreviations*, at classmark Ref Z6945.A2 .P47 2001.]

As there is only one journal with this title, you are taken straight to its record.

Colloquium mathematicum.

Title: Colloquium mathematicum.
Other Entries: Instytut Matematyczny (Polska Akademia Nauk)
Published: v. 1-2: Wrocław : [s.n.], 1947-
v. 3- : Wrocław : PWN
Publication history: 1.1 (1947)-
Description: v. : ill., ports. ; 25 cm.
Current frequency: Irregular
ISSN: 0010-1354
Notes: Also issued online.
English, French, German, and Russian.
Vols. for 1954- issued by: Polska Akademia Nauk, Instytut Matematyczny.
Vol. 1 (1947)-25 (1972), in v. 25.
Subjects: Mathematics--Periodicals.

Holdings Information

Location:	Betty & Gordon Moore Library: Journals
Classmark:	QA
Number of Items:	64
Status:	Available
Library Has:	1.1 (1947)-
Recent Issues:	v. 130, no. 2 (2013) v. 130, no. 1 (2013)

You can now see that the year you need is in the Library, and that the journal is shelved under classmark QA.

Author / Title Search for Books

You want to find the book given in the reference:

R. Rajaraman

[79] *Solitons and instantons : an introduction to solitons and instantons in quantum field theory, North-Holland, 1982.*

Use the 'Advanced' search option.

Basic **Advanced** [Search History](#)

Search: all of these

all of these

Type the author's surname into the first box and choose 'within Author Name'.

Type a distinctive word from the title into the second box and choose 'within Title'.

Click on 'Search' at the bottom of the screen.

You now get a list of all the books which match those two words:

The screenshot shows a search results interface with a light blue header. On the left, there are buttons for 'Print', 'Export', and 'E-mail'. In the center, there is a 'Select' checkbox and the text 'Page'. On the right, there is a 'Sort By:' dropdown menu. Below the header, there are two search results, numbered 1 and 2. Result 1 is highlighted in white and includes a book icon, the author's name 'Rajaraman, R.', the title 'Solitons and instantons : an introduction to solitons and instantons in quantum field theory / R. Rajaraman.', the year '1982', the call number 'QC174.45 .R35 1982', and a red 'X' icon with the text 'not currently available, Betty & Gordon Moore Library'. Result 2 is highlighted in grey and includes a book icon, the author's name 'Rajaraman, R.', the title 'Solitons and instantons : an introduction to solitons and instantons in quantum field theory / R. Rajaraman.', the year '1987', and the text 'multiple holdings available'. At the bottom of the results area, there are buttons for 'Print', 'Export', and 'E-mail', along with a 'Select' checkbox and the text 'Page'.

The date for the first book matches your reference, and clicking on this takes you to its record:

Solitons and instantons : R. Rajaraman.

Main author: Rajaraman, R.
Title: Solitons and instantons : an introduction to solitons and instantons in quantum field theory / R. Rajaraman.
Published: Amsterdam ; Oxford : North-Holland, 1982.
Description: vii, 409 p. : ill. ; 23 cm.
ISBN: 9780444862297
0444862293
Notes: Includes bibliographical references (p. [394]-402) and index.
Subjects: Quantum field theory.
Solitons.
Instantons.

Holdings Information

Location:	Betty & Gordon Moore Library
Classmark:	QC174.45 .R35 1982
Number of Items:	1
Status:	Lent - Due on 24-10-2012

Again, you can see that the Library holds the book, its classmark is QC174.45 .R35 1982, and it's currently on loan.

Books in numbered series

Sometimes you will come across references to books by their series title and number only, or even more confusingly, an article within one of these books. They are not journals, despite the fact that references can make them look very similar, and are best searched for as shown below. [If you are unable to tell whether a reference is to a series or a journal, ask for help or just try both methods of searching.]

You want to find the following work:

L. Carleson

[70] *The corona theorem, Lecture Notes in Math., Vol. 118 (1970), 121-132.*

Use the 'Advanced' search option.

Basic **Advanced** [Search History](#)

Search: all of these within

Alter the top option to be 'within Series', and type keywords from the series title plus the volume number into the search box. Click on 'Search' at the bottom of the screen.

Again, you will be taken to a list of all books that match your search words:

Print Export E-mail Select Page Sort By:

1 **Differential equations : proceedings of the EQUADIFF Conference / edited by C.M. Dafermos, G. Ladas, G. Papanicolaou.**
Czech-Slovak Conference on Differential Equations and Their Applications (1987 : Democritus University)
1989
multiple holdings available

2 **Proceedings of the 15th Scandinavian Congress, Oslo, 1968 / edited by K.E. Aubert and W. Ljunggren.**
Scandinavian Congress of Mathematicians (15th : 1968 : Oslo)
1970
QA1 .S33 1968
multiple items available, Betty & Gordon Moore Library

Print Export E-mail Select Page

The publication date suggests that the second book is more likely to be the correct one.

Click on its title to see the full record display:

Proceedings of the 15th Scandinavian Congress, Oslo, 1968 / edited by K.E. Aubert and W. Ljunggren.

Conference Name: Scandinavian Congress of Mathematicians (15th : 1968 : Oslo)
Title: Proceedings of the 15th Scandinavian Congress, Oslo, 1968 / edited by K.E. Aubert and W. Ljunggren.
Other Entries: Aubert, Karl Egil.
Ljunggren, W.
Published: Berlin : Springer, 1970.
Description: 163 p. : ill. ; 26 cm.
ISBN: 354004907X (Berlin)
038704907X (New York)
Series: [Lecture notes in mathematics](#) (Springer-Verlag) ; 118.
Series variant: [Lecture notes in mathematics](#) ; 118

This shows you that this is the book you want, and you can find the classmark by scrolling further down the page.

LibrarySearch



LibrarySearch

[LibrarySearch](#) enables the cross-searching of records for printed books, journals, and electronic material held in all the libraries in the University of Cambridge. Records from the [Newton](#) library catalogues and the [DSpace@cambridge](#) repository are included.

Networked information services

Campus wide information services are co-ordinated and supported centrally by the University Library.

The main [Electronic Resources](#) page at the Library website provides a search/browse option for both electronic journals and online databases, which is useful if you know the title of the resource you want to utilise; and alternatively lists all the resources available in each given subject area, e.g. 'Mathematical Sciences'.

Access and passwords

Many networked electronic services are made available within the "cam" domain via IP address recognition, and for these no password is required. Most of the remainder are accessible using a [Raven](#) password.

Raven passwords are [issued](#) to current staff and students of the University by the Computing Service.

Frequently-updated information about access and passwords is [available](#) from the University Library.

Retrospective literature searching

Mathematics-specific databases

If you are interested in finding out what books and articles from journals and conference proceedings exist on a particular subject or by a given author (say), the most important electronic resource available in mathematics is:



[MathSciNet](#) - the online version of *Mathematical Reviews* and *Current Mathematical Publications*, published by the American Mathematical Society. Updated daily, the database contains full text reviews from 1940 onwards. This database works on IP address recognition.

General databases

Possibly the most valuable of the general databases available to you are:



[Web of Knowledge](#). This platform provides access to a variety of valuable resources, including *Web of Science* and *Inspec*.

Web of Science is the online version of the *ISI Citation Indexes* and *ISI Proceedings*. Updated weekly, the databases contain abstracts and indexes for journal articles and a small selection of monographic series volumes in all subject areas from at least 1970 onwards (from 1899 for science subjects); along with articles in conference proceedings from 1990 onwards. Since each record contains a list of all references cited in the corresponding article, it is possible to search for all articles that cite a known author or work.

Inspec is the online version of *Science Abstracts*. Updated weekly, the database contains abstracts of journal articles and conference papers (as well as significant books, technical reports, and dissertations) from 1969 onwards in the areas of physics, electrical engineering, electronics, computers, control, and information technology; so is probably of most interest to applied mathematicians.

It is also possible to cross-search all these products. You need a Raven password to make use of this package of resources.



[Scopus](#) - is the largest abstract and citation database of research literature (journals, book series, conference proceedings and patent records) and quality web sources across all subject areas. It contains records for selected material dating back to 1823, and is updated daily.

The subject coverage of both these resources is wider, and correspondingly shallower, than the maths-specific resources, making them ideal for finding peripheral and interdisciplinary material.

Databases of dissertations and theses

Dissertations and theses are generally indexed separately from other types of literature. The two databases available (which cover all subject areas) are:



[EThOS \(Electronic Theses Online Service\)](#) - a database provided by the [British Library](#) which aims to offer a unified access point for all theses produced by UK Higher Education. Of the theses listed, some will be available in electronic form for immediate free download, while others will only be represented by a summary 'catalogue-style' record. This database is completely free to search, and only requires you to register (which is also free) if you wish to download any of the theses. Once registered, you are also able to request digitisation of any of the theses not yet available for download, but a charge does apply for this service.



[Proquest Dissertations & Theses](#) - a database of references to doctoral and masters dissertations from 1861 onwards. Although the main focus is on the US, dissertations from universities in Europe and the rest of the world are also included. This database works on IP address recognition.

All University of Cambridge theses (for the degrees Doctor of Philosophy, two-year Master of Philosophy, Master of Science and Master of Letters) accepted since 1921 are held in the Manuscripts Reading Room at the University Library. Such theses from 1970 onwards have records on the [Newton Manuscripts and Theses](#) catalogue. A small but increasing number of Cambridge theses are available for immediate download from [DSpace@Cambridge](#).

The Moore Library thesis collection holds selected PhD theses from DAMTP and DPMMS, which are searchable via the usual [Newton](#) catalogue.

Current awareness

It is possible to sign up for services that will send you emails alerting you as new material is published in a given journal or on a particular subject. Many are provided by publishers themselves, but a good place to start would be:



[ZETOC Alert](#). ZETOC itself is another useful general database of references to journal articles and conference papers maintained by the British Library, while by signing up to ZETOC Alert you can be emailed the table of contents from particular journals or receive details of articles which match your predefined search criteria.

Ejournals

The University Library subscribes to a large number of electronic journals. These can be accessed from the [ejournals@cambridge](#) page, which provides title and ISSN searches that return information on which years are included in the subscription and how access to the titles is controlled.

For example,

Journal of the American Mathematical Society (0894-0347)

from 1988 to present in [American Mathematical Society Publications](#)

from 01.01.1988 to 31.10.2008 in [JSTOR Arts & Sciences I](#)

Ebooks

The University is also building up a collection of ebooks, which can be accessed from the [ebooks@cambridge](#) page.

The packages of especial interest to mathematicians include those published by [SIAM](#), [Springer](#), and selected titles from [CUP](#). In particular, the Moore Library provides access to the whole [Geometry & Topology](#) collection from CUP.