

Resources for Applied Mathematics

Contact details for further help are at the end of this guide.

The resources in this guide will help you learn more about your subject. The best place to start your search is **Discover**, which provides you with easy access to thousands of books, eBooks, journal articles and much more. You can access Discover and other key resources via the Library website, LJMU student homepage and MyLJMU portal.

Remember, your modules also have reading lists in Canvas with links to recommended books, eBooks, journal articles and other subject resources.

Books and eBooks

There is an extensive collection of books and eBooks on all aspects of Mathematics. You can browse what is available in your subject area or look for specific titles by searching **Discover**.

- Go to **Discover**, if prompted, **Sign in** with your **LJMU username@ljmu.ac.uk** and **password**
- Type a book title or keywords and select the search icon
- From the results screen, you can filter your results by selecting **Books**
- Select a book title to see more details and availability
- eBooks will have links to view online
- Print books will show number of copies and location

Print books have a class number and are organised numerically by that number on the shelves.

Common class numbers are shown below:

Algebra	512
Analytic Methods	
For example: Vector, Tensor, Spinor	515.63
Arithmetic	513
Calculus	515
Differential Equations	515.3
Game Theory	519.3

General Principles of Mathematics	511
Geometry	516
Graph Theory	511.5
Linear Algebra	512.5
Mathematical Logic	511.3
Mathematical Models and Simulation	511.8
Numerical Analysis	518
Operations Research	658.4034
Probabilities and Applied Mathematics	519
Pure Mathematics	510
Series	
For example: Fourier, Power, Wavelets	515.243
Statistics and Data Analysis	519.5
Topology	514
Transforms	
For example: Fourier, Laplace, Hilbert	515.723

Journals

Journals are published on a regular basis and contain up-to-date information. Journals contain articles focussing on specific topics written by subject specialists.

To find individual journal titles on your subject area:

- Go to **Discover**, if prompted, **Sign in** with your **LJMU username@ljmu.ac.uk** and **password**
- Select the **Journals** option
- Type a journal title you wish to access and select the search icon
- Select a journal title to see more details and availability
- eJournals will have links to view online
- Print journals will show number of issues and location

A selection of journals on Mathematics are shown below:

Acta Mathematica

Advances in Applied Mathematics

Applied Mathematical Modelling

European Journal of Applied Mathematics

International Journal for Technology in Mathematics Education
Journal of Mathematical Analysis and Applications
Journal of Mathematical Sciences
Journal of the Royal Statistical Society
Mathematical Gazette
Mathematical Methods of Operations Research
Mathematical Programming
SIAM Journal on Applied Mathematics
Statistics and Computing
Studies in Applied Mathematics
Teaching Mathematics and its Applications

Databases

You can search for journal articles using **Discover** or via individual databases. There are different types of databases. For example:

- **Full-text databases** provide access to full-text information such as journal articles, reports, book chapters, newspaper articles, etc.
- **Abstracting and Indexing Databases** are searchable indexes; you can view the abstract or summary for each resource. If full-text is available follow the link, if not you can request an **Inter-library loan**.

To access a database:

- Go to **Discover**, if prompted, **Sign in** with your **LJMU username@ljmu.ac.uk** and **password**
- Select the **Databases** option
- Select **Mathematics** to see suggested databases or type the name of the database in the search box and select the **search icon**
- Select the database title to see more details and note any log-in requirements
- Select the database link

Academic Full-text Databases

ACM Digital Library

A research discovery platform from the Association for Computing Machinery (ACM) that provides access to over 2.8 million publications from 1908 – Present including journals, conference proceedings, technical magazines, newsletters and books. A wide variety of topics are covered, everything from machine learning and network security, to software

engineering and human-computer interaction. It also includes The ACM Guide to Computing Literature – a comprehensive index of research abstracts focused exclusively on the field of computing.

[BoB \(Box of Broadcasts\)](#)

Box of Broadcasts (BoB) gives you access to an archive of over one million TV and radio programmes from 2007 onwards, including all the main free-to-air TV channels. You can link, make short clips and playlists of content.

[ERIC](#)

Education Resource Information Center (ERIC) provides coverage of journals, conferences, government US government documents, reports on education related areas.

[Emerald Insight](#)

Provides access to peer-reviewed journals, books and case studies. Content covers a wide range of subjects including accounting and finance, business and management, marketing, education, information studies and engineering.

[IEEE XPlor](#)

A powerful research tool that provides access to key scientific and technical publications from IEEE (Institute of Electrical and Electronics Engineers) and its partners such as: IEEE journals, IEEE conference proceedings, IEEE standards and the IEEE-Wiley eBooks Library and IET conference proceedings.

[IET Open Access Journals](#)

Provides access via the IET (The Institution of Engineering and Technology) Hub to the collection of IET open access journals from 2013 to date.

[IOPscience \(Institute of Physics Journals\)](#)

IOPscience is an online service for journal content published by IOP Publishing. IOPscience embraces innovative technologies to make it easier for researchers to access scientific, technical and medical content. Has a rolling 10-year full text archive.

[ProQuest Central](#)

ProQuest Central provides access to databases across all major subject areas and includes thousands of full-text scholarly journals, trade and professional titles, newspapers, magazines, dissertations, working papers, case studies, and market reports.

[ScienceDirect](#)

A world leading database for scientific, technical, and medical research. It provides full-text access to more than 16 million peer-reviewed publications such as journal articles, reviews, book chapters and major reference works. Digital archive date back to 1823.

[Taylor and Francis](#)

A multidisciplinary database providing full-text access to quality, peer-reviewed journals published by Taylor & Francis, Routledge and Psychology Press

[Wiley Online Library](#)

A multi-disciplinary database providing access to over 4 million articles from 1,600 journals, online book chapters and eBooks published by Wiley.

Academic Abstracting and Indexing Databases

Compendex

An abstracting and indexing database covering all areas of engineering and applied science. Coverage includes transportation, optical technology, computers and data processing, electronics and communications, civil, mechanical, materials and automotive engineering as well as narrower subtopics within all these and other major engineering fields. The database indexes over 4,000 engineering journal titles and over 95,000 conference proceedings

Inspec

A leading abstracting and indexing database covering all areas of engineering and applied science. Coverage includes electrical engineering, electronics, physics, control engineering, information technology, communications and computing. The database indexes over 5,000 technical and scientific journal titles and over 70,000 conference proceedings

Scopus

A multi-disciplinary abstract and citation database of peer-reviewed literature: journals, books and conference proceedings, many with links to full text.

Web of Science

A powerful research platform and global citation index including over 161 million records for books, journals, and conference proceedings across 254 disciplines. Web of Science also includes comprehensive archives from 1900+ and citation data such as journal impact factors and h-index to help you identify quality research.

Zetoc

Zetoc Search offers access to the contents pages of more than 39,500 current journals and 65.5 million article citations and conference papers dating back to 1993. The database is updated daily. Zetoc Alert is a current awareness service, which sends email alerts matching your search criteria whenever new records are added to the database.

You can check if LJMU has access to full-text by clicking on the **Full Text** icon within the database, this will check our other collections and direct you to any available full-text.

Statistics, social and business data databases

The following databases offer statistical evidence and reports including social and economic data.

Fame

Provides financial reports and analysis of private and public limited companies in the UK and Republic of Ireland.

IBIS World

A collection of industry reports organised by Standard Industry Classification (SIC) codes. It covers a broad array of industry sectors. The coverage includes global reports and country

specific reports covering UK, Germany, US and Mexico. The reports provide analysis of each industry including industry performance, supply chain, key players, and competitive landscape.

MINTEL

Market intelligence provides an outlook on the consumer landscape this includes data, market research, market analysis, competitive intelligence, and product intelligence: the expert analysts combine these elements to create insight of the market.

Passport

Provides intelligence on industries, economies, consumers, and companies. Passport is a global market analysis platform that analyses the industry in countries around the world providing cross-country comparison of market sizes, forecasts and market shares.

Statista

Provides access to statistics, studies and reports on countries, industries, and consumer markets. It has global coverage.

UK Data Service

The UK's largest collection of social, economic and population data resource, including UK census data and government funded surveys as well as qualitative and business data.

Websites

The content of websites is unregulated. Therefore, it is important that you check the quality and accuracy of information on the internet to ensure that it is reliable, accurate and of an academic standard. There are selected websites or search engines that you can use to help find appropriate information online, for example Google Scholar. If you find details for a relevant resource on the internet, you can check if LJMU has full-text access.

A selection of useful websites and search engines are shown below:

arXiv.org

An open access repository of 1,588,176 e-prints and publications in the fields of physics, mathematics, computer science, quantitative biology, quantitative finance, statistics, electrical engineering and systems science, and economics. arXiv.org is available at:

<http://arxiv.org/>

Google Scholar

A large search engine which provides access to scholarly information and includes links to selected full-text from LJMU's resources. Access to LJMU's full-text content occurs automatically on campus; for off campus access you need to click Settings, Library Links and save Liverpool John Moores University as your institution. Google Scholar is available at: <http://scholar.google.co.uk/>

Project Euclid

An online platform for mathematics scholarly publishers which provides access to selected open access journal articles. Project Euclid is available at: <http://projecteuclid.org/>

RefSeek*

An academic search engine which locates scholarly information. RefSeek* is available at:
<http://www.refseek.com/>

Wolfram MathWorld

An extensive mathematical resource, provided as a free service to the world's mathematics and internet communities as part of a commitment to education and educational outreach by Wolfram Research, makers of Mathematica. Wolfram MathWorld is available at:
<http://mathworld.wolfram.com/>

Further Help

The Academic Engagement Librarian for the School of Computer Science and Mathematics is:

Donna Burgess – d.m.burgess@ljmu.ac.uk

Please contact her to arrange a one-to-one appointment.

Guide by: Donna M. C. Burgess

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