



zbMATH

the first resource for mathematics

- The most comprehensive reviewing and abstracting service in mathematics
- Complete coverage of mathematical publications from 1868 to the present
- Over 3.6 million records from more than 3,000 current journals and serials, and more than 171,000 books

zbmath.org

NEW features:

- Extended citation analysis
- Integration of links to free arXiv versions
- A sub-database for mathematical software



New Editor-in-Chief

Klaus Hulek, Professor and former Vice President for Research at Leibniz Universität Hannover, and former representative of the German Rectors' Council in the Research Policy Working Group of the European University Association (EUA).

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zbMATH

The world's largest database for mathematics offers easy access to article reviews and abstracts in mathematics from the 19th century to the present

The amount of scientific information and publications in the field of mathematics and its applications has immensely grown over the last decades. This increases the need of scholars, scientists and librarians to have a comprehensive resource of curated information on knowledge in all mathematical disciplines.

zbMATH, well known under its former name Zentralblatt MATH, provides easy access to bibliographic data, reviews and abstracts from all areas of pure and applied mathematics, as well as its applications, in particular to the natural sciences, computer science, economics and engineering. It also covers history and philosophy of mathematics and university education. All entries are classified according to the Mathematics Subject Classification Scheme (MSC 2010) and are supplemented with keywords in order to characterize their particular content and to allow for efficient retrieval.

Key Features

- Over 3.6 million publication records from more than 3,000 journals and serials and 171,000 books, from 1868 to the present
- New content daily, with about 120,000 additions per year
- Rigorous editorial process where all entries are semantically enriched with appropriate MSC codes and keywords
- Independent reviews contributed by 7,000 global expert mathematicians, supplementing the majority of records in core mathematics areas
- More than 2.1 million documents with direct links to full texts or open repositories and digital libraries like arXiv.org, EuDML, Numdam, Project Euclid, and others
- More than 900,000 author profiles with information on the publication record, scientific networks, publication topics and citation analysis
- Community interface supports author name disambiguation and addition of external links like to Math Genealogy Project, Wikipedia, Math-Net.Ru or Researchgate
- Display and cross-linking of almost 18 million references highlighting citation relations between records
- Integrated MathML and optional MathJax enables immediate display of mathematical equations and formulae
- Semantic enrichment of the data and addition of complementary facets such as mathematical software
- Formula search available as sole feature and integration into the structured search allows for free combination with other query types

Anticipating the future of scholarly communication

In today's dynamically changing publication landscape, new types of information are becoming important. Bibliographical services, no longer mere repositories of metadata, must answer questions pertaining to scientific networks, authorships and semantic interrelations. zbMATH meets the needs of today's mathematicians by presenting this multifaceted information quickly and easily. The new interface, zbmath.org, combines deep search capabilities with a user friendly and intuitive design. The comprehensive abstract information is supplemented by links to the original source documents, open repositories, and digital libraries, bringing the world of mathematics to every user's fingertips.

zbMATH – an innovative web service

The powerful search capabilities of zbMATH are embedded in a cutting-edge interface

Clean Google-like interface, with separated tabs for easy navigation among different search facets: documents, authors, journals, classification codes, software and formulae

The screenshot shows the zbMATH search interface. At the top, there are navigation tabs for Documents, Authors, Journals, Classification, Software, and Formulae. A search bar contains the query $?a^n+?b^n=?c^n$. Below the search bar, it indicates 'Page 1 of 1' and 'Found 13 documents (Results 1-13)'. Three document entries are listed:

- Grobstich, Peter**: **The great theorem of Fermat on the equations $x^N + y^N = z^N$. Theory, computations, history. (Der Große Satz von Fermat über die Gleichungen $x^N + y^N = z^N$. Theorie, Berechnungen, Geschichte.)** (German) [Zbl 1266.01001]. Berichte aus der Mathematik. Aachen: Shaker Verlag (ISBN 978-3-8440-1706-9/pbk), 85 p. EUR 16.80; SFR 21.00 (2013). MSC: 01-01 01A45 01A60 11-03 11D41. Reviewer: Franz Lemmermeyer (Jagstzell).
- Mozzochi, C. J.**: **The Fermat proof.** (English) [Zbl 1104.11001]. Victoria: Trafford Publishing (ISBN 1-4120-2203-7/pbk), ix, 50 p. \$ 19.95; £ 11.95 (2004). MSC: 11-01 11G05 11F80 11D41 00A06 11F12. Reviewer: Werner Kleinert (Berlin).
- Karmakar, Sudhangshu B.**: **On a pair of Diophantine equations.** (English) [Zbl 1064.11026]. Int. J. Math. Sci. 2, No. 2, 245-249 (2003).

A sidebar on the right titled 'Filter results by ...' shows filters for Authors (Wong, Chiaho (1), Sitaraman, Sankar (1), Schoof, René (1), Ribet, Kenneth A. (1), Ribenboim, Paulo (1)), Journals (Int. J. Math. Sci. (1), Bull. Am. Math. Soc., New Ser. (1), Appl. Math. Mech., Engl. Ed. (1), Trans. Am. Math. Soc. (1), Normat (1)), and Classification (11-xxx (13)).

Formula search using place holders to find all related documents

Search results can be filtered by authors, journals, classification codes and publication years, ordered according to frequency of citation

Display of a single record

The screenshot shows a detailed view of a document record. The document is titled 'On modular representations of $\text{Gal}(\overline{\mathbb{Q}}/\mathbb{Q})$ arising from modular forms. (English) [Zbl 0773.11039]'. The author is Ribet, K.A. The record includes a detailed abstract, MSC classification (11F80, 11G18, 11G05, 11S37, 14G35), keywords, and a list of references.

MSC:
 11F80 Galois representations
 11G18 Arithmetic aspects of modular and Shimura varieties
 11G05 Elliptic curves over global fields
 11S37 Langlands-Weil conjectures, nonabelian class field theory
 14G35 Modular and Shimura varieties

Keywords:
 modularity of curves; Shimura curves; Jacobians; Fermat's last theorem; conjecture of Serre; modular Galois representation; Taniyama-Shimura-Weil conjecture

References:
 [1] Atkin, A.O.L., Lehner, J.: Hecke operators on $F_0(m)$. Math. Ann. 185, 134-160 (1970) - Zbl 0185.15502 - doi:10.1007/BF01359701
 [2] Carayol, H.: Sur la mauvaise réduction des courbes de Shimura. Compos. Math. 59, 151-230 (1986)
 [3] Cerednik, I.V.: Uniformization of algebraic curves by discrete arithmetic subgroups of $\text{PGL}_2(k_w)$ with compact quotients (in Russian).

All bibliographic information is displayed in a clean and comprehensible way

Formulae and diagrams shown in MathML for a browser-independent, correct visualization

External experts provide their independent point of view with a review of the publication

Shows how often this document was cited (including zbMATH reviews). Click to display the full list

Appropriate codes from the MSC classification scheme and keywords contribute to the semantic enrichment of the records

Multiple links to full-text records, including to publishers via DOI, as well as to full-text open repositories and digital libraries

Complete list of references of this publication

Author Profile

zbMATH Documents Authors Journals Classification Software Formulæ

ai.perelman.grigori-yakovlevich Fields ▾ Operators ▾ Help ▾

Perel'man, Grigoriĭ Yakovlevich

Author ID: perelman.grigori-yakovlevich
Published as: Perel'man, G.Ya.; Perelman, Grisha; Perelman, G.; Perel'man, G.
External Links: [MGP](#) · [Math-Net.Ru](#) · [Wikidata](#)

Documents indexed: 22 Publications since 1985

Co-Authors **Journals** all ▾ **Classification**

1 Burago, Yu.D. 1 Gromov, Mikhael 1 Petrunin, A.M. 1 Polikanova, I.V.	3 arXiv e-print service [electronic only] 2 Journal of Soviet Mathematics 2 Sibirskij Matematicheskij Zhurnal 2 Ukrainskij Geometricheskij Sbornik 2 St. Petersburg Mathematical Journal	18 Differential geometry (53-XX) 4 Convex and discrete geometry (52-XX) 4 Manifolds and cell complexes (57-XX) 1 Global analysis, analysis on manifolds (58-XX)
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Publications by Year

New! Collaboration distance tool

New! External links to Math Genealogy Project, Wikipedia, Math-Net.Ru or Researchgate

Breakdown according to coauthors, journals and mathematical subjects

Publications are displayed in chronological order as a clickable diagram for easy visualization of the author's scientific output

Citations contained in zbMATH (collection of data to be completed) all cited Publications ▾

15 Publications have been cited 652 times in 431 Documents

	Cited by	Year
The entropy formula for the Ricci flow and its geometric applications: Zbl 1130.53001 Perelman, Grisha	307	2002
Ricci flow with surgery on three-manifolds: Zbl 1130.53002 Perelman, Grisha	144	2003
Finite extinction time for the solutions to the Ricci flow on certain three-manifolds: Zbl 1130.53003 Perelman, Grisha	90	2003
A. D. Alexandrov spaces with curvature bounded below: Zbl 0802.53018 Burago, Yu.; Gromov, M.; Perelman, G.	32	1992
Proof of the soul conjecture of Cheeger and Gromoll: Zbl 0818.53056 Perelman, Grisha	16	1994

Cited by Authors all ▾ **Cited in Journals** all ▾ **Cited in Fields** all ▾

17 Ma, Li 10 Wu, Jia-Yong 8 Cao, Xiaodong 8 Guo, Hongxin 8 Lu, Peng	27 The Journal of Geometric Analysis 24 Geometry & Topology 22 Geometriae Dedicata 21 Annals of Global Analysis and Geometry 19 Duke Mathematical Journal	346 Differential geometry (53-XX) 94 Global analysis, analysis on manifolds (58-XX) 79 Manifolds and cell complexes (57-XX) 65 Partial differential equations (35-XX) 22 Relativity and gravitational theory (83-XX)
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Citations by Year

Shows the 5 most cited articles, their publication year and how often they have been cited. Daily extended and updated.

Expand list to show all cited publications

Overall number of citations divided into: cited by whom, in which journals and in what field

Number of citations made to author's publications per year

Journal Profile

Inventiones

Online: <http://link.springer.com/journal/volumesAndIssues/222>

Comments: Indexed cover-to-cover

Documents indexed: 4031 publications since 1966

Authors	all ▾	Classification	all ▾
14 Iwaniec, Henryk		1153 Algebraic geometry (14-XX)	
13 Deligne, Pierre		759 Number theory (11-XX)	
13 Eisenbud, David		498 Several complex variables and analytic spaces (32-XX)	
12 Harris, Joseph Daniel		487 Manifolds and cell complexes (57-XX)	

- Bibliographic information and direct link to the journal
- Breakdown of most prolific authors and research fields
- **NEW!** Full citation analysis, including most cited articles as well as citing journals

Citations contained in zbMATH (collection of data to be completed)

3732 Publications have been cited 56234 times in 36706 Documents

Publication	Zbl	Cited by	Year
Representations of Coxeter groups and Hecke algebras. Kazhdan, David; Lusztig, George	Zbl 0499.20035	360	1979
Pseudo holomorphic curves in symplectic manifolds. Gromov, M.	Zbl 0592.53025	325	1985
Ordinary differential equations, transport theory and Sobolev spaces. DiPerna, R.J.; Lions, P.L.	Zbl 0696.34049	289	1989
Index for subfactors. Jones, V.F.R.	Zbl 0508.46040	240	1983
Invariants of 3-manifolds via link polynomials and quantum groups. Reshetikhin, N.; Turaev, V.G.	Zbl 0725.57007	181	1991

Cited by Authors	all ▾	Cited in Fields	all ▾	Cited in Journals	all ▾
79 Ballico, Edoardo		7810 Algebraic geometry (14-XX)		2805 Journal of Algebra	
40 Bourgain, Jean		5247 Number theory (11-XX)		2045 Inventiones Mathematicae	
39 Bismut, Jean-Michel		4424 Differential geometry (53-XX)		1878 Mathematische Annalen	
38 Kashiwara, Masaki		4299 Group theory and generalizations (20-XX)		1662 Advances in Mathematics	
37 Lusztig, George		3740 Several complex variables and analytic spaces (32-XX)		1391 Duke Mathematical Journal	

Citations by Year

swMATH – Search facet for mathematical software

Short description of the software package

Related keywords

Links to zbMATH documents mentioning the software

swMATH Search

Maple

The result of over 30 years of cutting-edge research and development, Maple helps you analyze, explore, visualize, and solve mathematical problems. With over 5000 functions, Maple offers the breadth, depth, and performance to handle every type of mathematics. Maple's intuitive interface supports multiple styles of interaction, from Clickable Math™ tools to a sophisticated programming language. Using the smart document environment provided by Maple, you can automatically capture all of your technical knowledge in an electronic form that combines calculations, explanatory text and math, graphics, images, sound, and diagrams.

URL: www.maplesoft.com/
 Authors: Waterloo Maple Inc.
 Dependencies: Maple

Add information on this software.

Related software:
 Mathematica
 Matlab
 MACSYMA
 REDUCE
 SINGULAR
 AXIOM
 GAP
 Magma
 Macaulay2
 RegularChains
 Show more...

This software is also referenced in ORMS.

Keywords for this software

References in zbMATH (referenced in 3632 articles, 10 standard articles)

Showing results 1 to 20 of 3632. Sorted by year (citations) 20 ▾

1 2 3 ... 180 181 182 next

- 1 Abramovich, Sergei: Exploring mathematics with integrated spreadsheets in teacher education (2016)
- 2 Alcázar, Juan Gerardo; Hermoso, Carlos: Involutions of polynomially parametrized surfaces (2016)
- 3 Aïev, Aï V.; Mishchenkova, Olga V.; Lipanov, Alexey M.: Mathematical modeling and numerical methods in chemical

Article statistics & filter:
 Search for articles
 MSC classification
 Top MSC classes
 11 Number theory



Benefits for mathematicians

- Always rely on zbMATH for the latest search results, as content items are uploaded daily
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