

2012



Zentralblatt MATH/ZBMath Training Guide

Why an Abstracting and Indexing Service in Mathematics?

- To provide comprehensive information on all available mathematical literature
- To provide a unique navigation tool for accessing mathematical publications
- To provide a data-mining tool for detecting trends in mathematical research, historical and temporary
- To describe the mutual impact of mathematical publications
- To provide a large infrastructure for mathematical research and applications of mathematics

Zentralblatt MATH (ZBMATH)

- The **world's largest and most comprehensive, most accurate, and longest running reviewing service** in mathematics.
- Offers **complete and easy access** to abstracts and reviews in mathematics **from 1868** to the present.
- Contains **more than 3 million entries** drawn from more than **3,500 journals and 1,100 serials**, with coverage across mathematics, statistics, computer sciences and applications of these disciplines to engineering, physics, economics, life sciences and more. Includes about 160,000 books.
- Reviews are written by **more than 6,000 active experts** from all over the world and **over 120,000 new items are added each year**.
- Contains in total about 35,000 reviews. 50% of the items in core mathematic disciplines are covered by reviews.

Zentralblatt MATH / ZBMATH

the whole world of mathematics and its applications

- Logic and foundations
- Algebra
- Number theory
- Algebraic and complex geometry
- Geometry
- Topology
- Lie theory and generalizations
- Analysis
- Functional analysis and applications
- Dynamical systems and ordinary differential equations
- Partial differential equations
- Mathematical physics
- Probability and Statistics
- Combinatorics
- Mathematical aspects of computer science
- Numerical analysis and scientific computing
- Control theory and optimization
- Mathematics in science and technology
- Mathematics education and popularization of mathematics
- History of Mathematics

Who stands behind Zentralblatt MATH

- Editor-in-Chief as of 2012:
Gert-Martin Greuel, the director of the world-famous Mathematical Research Centre, Oberwolfach. Professor at the University of Kaiserslautern, and Chair of ERCOM (European Research Centres on Mathematics)
- Edited by:
 - FIZ Karlsruhe
 - EMS (European Mathematical Society)
 - Heidelberg Academy of Science
- Published by Springer



Advantages of Zentralblatt MATH: CONTENT

- Number of entries/items: More than 3 million
- Quality of items: All items since 1970 indexed with an MSC code (Mathematics Subject Classification) – about 2.6 million items MSC-categorized; nearly all items categorized with keywords; only about 3% are not categorized (“title-only”) as they are recent input
- All items go through a review process
- Journals covered: about 3,500
- Series covered: about 1,100
- Books covered: about 160,000
- Coverage: starting as of 1826, complete coverage as of 1868
High relevancy of “old” publications: e.g. between 2000 and 2009 more than 1,200 papers were cited which were published 1880-1889

Advantages of Zentralblatt MATH: USABILITY

- Search Options: Free logical combination of facets possible; option of refining / enlarging search results; search history, several additional search options (source, language, publisher, keywords, ISBN, DOI)
- Author Search: Any order of first / surname and abbreviations works; multiple author search possible
- Repositories: Direct link to arXiv.org and other open access repositories like ElibM, Numdam, Euclid etc.
- Formulas: Quick, accurate and complete display also of complex formulas and equations eased through MathML which is preset.

Why Librarians would subscribe to Zentralblatt MATH / ZBMath

To be sure to offer:

- The world's largest and most complete reviewing service in mathematics containing all abstracts and reviews in mathematics from 1868 – in some cases even from 1826 – to present.
- More than 3 million entries; items uploaded daily.
- A broad coverage of mathematical books which are also uploaded quickly after publication.
- A unique Search: Free logic combination of facets possible offering even specific searches e.g. for source, language of publication, keywords, publisher, ISBN, DOI.
- A quick, accurate and complete display also of complex formulas and equations guaranteed by the integration of MathML (Mathematical Markup Language).

Get Started

Enter Zentralblatt MATH at: www.zentralblatt-math.org

Depending on the browser, the URL will guide you to the newest interface possible

Browsers

Highly recommended to install the free MathPlayer plug-in to be able to enter the **newest database version** including the newest **author database** and guaranteeing a **correct display of mathematical formulas**

- Recommended browser: Mozilla Firefox
- Internet Explorer from 8.0 partially possible via MathPlayer plugin, without plugin probably possible from 10.0
- Opera (as of 9.5), Safari (as of 5.1), SeaMonkey, Iceweasel, Netscape, Chrome (most likely as of 20.0)

Continue with a live demo (internet) or use the following screenshots

- Be aware of changes of the ZBMath websites – re-design is planned to improve navigation and usability in general
- In process: all browsers direct to the same interface

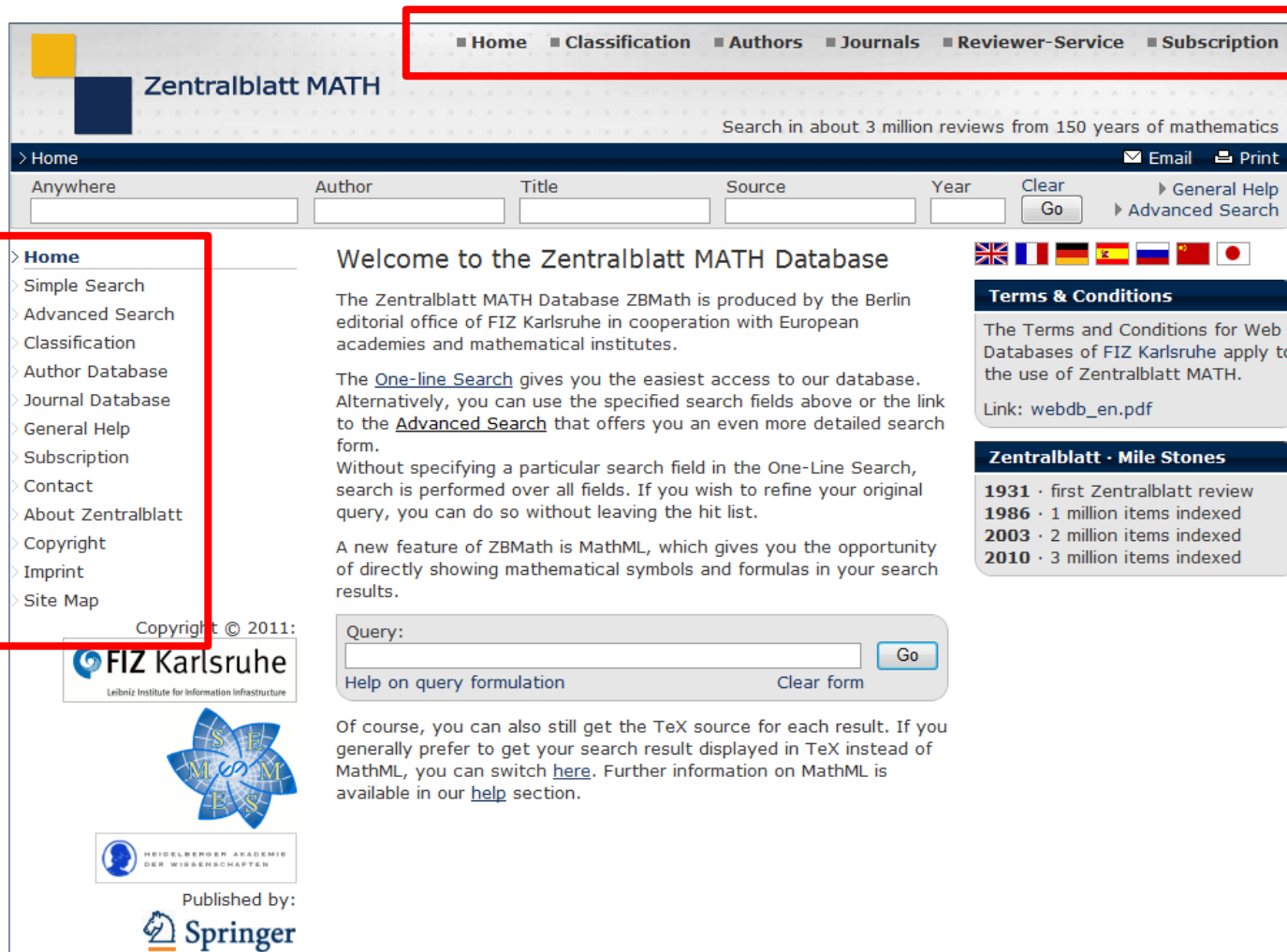
Be aware of the Interface Versions www.zentralblatt-math.org

Depending on the browser, the URL will guide you to the newest interface possible.

- Older: zentralblatt-math.org/zmath/
- New: zentralblatt-math.org/zbmath/

Try the new interface

Navigation



The screenshot shows the Zentralblatt MATH website interface. A red box highlights the top navigation menu with the following items: Home, Classification, Authors, Journals, Reviewer-Service, and Subscription. Another red box highlights the left sidebar menu with the following items: Home, Simple Search, Advanced Search, Classification, Author Database, Journal Database, General Help, Subscription, Contact, About Zentralblatt, Copyright, Imprint, and Site Map.

Zentralblatt MATH

Search in about 3 million reviews from 150 years of mathematics

> Home ✉ Email 🖨 Print

Anywhere Author Title Source Year ▶ General Help
▶ Advanced Search

> **Home**
 > Simple Search
 > Advanced Search
 > Classification
 > Author Database
 > Journal Database
 > General Help
 > Subscription
 > Contact
 > About Zentralblatt
 > Copyright
 > Imprint
 > Site Map


Welcome to the Zentralblatt MATH Database

The Zentralblatt MATH Database ZBMath is produced by the Berlin editorial office of FIZ Karlsruhe in cooperation with European academies and mathematical institutes.

The [One-line Search](#) gives you the easiest access to our database. Alternatively, you can use the specified search fields above or the link to the [Advanced Search](#) that offers you an even more detailed search form.



Without specifying a particular search field in the One-Line Search, search is performed over all fields. If you wish to refine your original query, you can do so without leaving the hit list.


A new feature of ZBMath is MathML, which gives you the opportunity of directly showing mathematical symbols and formulas in your search results.

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 Leibniz Institute for Information Infrastructure

[Help on query formulation](#)

Of course, you can also still get the TeX source for each result. If you generally prefer to get your search result displayed in TeX instead of MathML, you can switch [here](#). Further information on MathML is available in our [help](#) section.

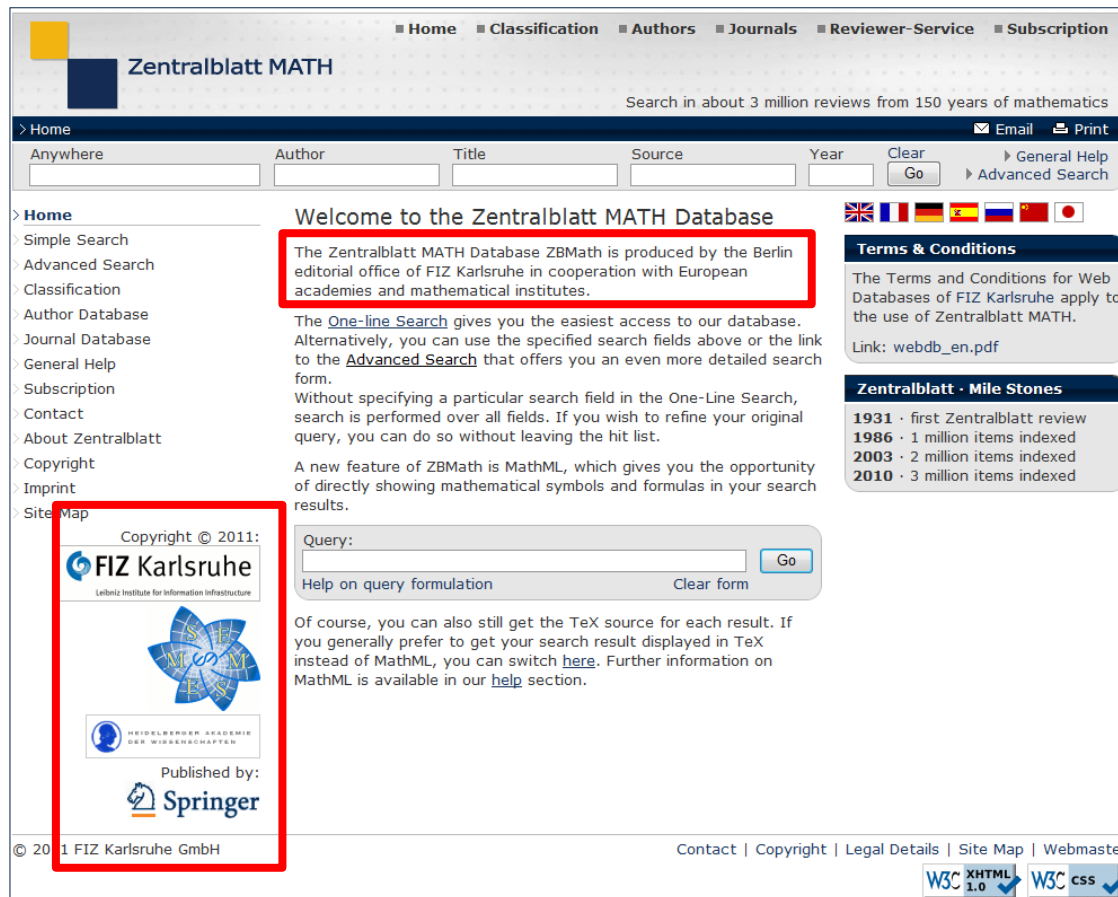

 Published by:
 Springer


Terms & Conditions
 The Terms and Conditions for Web Databases of FIZ Karlsruhe apply to the use of Zentralblatt MATH.
 Link: [webdb_en.pdf](#)

Zentralblatt · Mile Stones
 1931 · first Zentralblatt review
 1986 · 1 million items indexed
 2003 · 2 million items indexed
 2010 · 3 million items indexed

Top and left side navigation

Parties involved in ZBMATH:



■ Home ■ Classification ■ Authors ■ Journals ■ Reviewer-Service ■ Subscription
Zentralblatt MATH
 Search in about 3 million reviews from 150 years of mathematics




> Home Email Print
 Anywhere Author Title Source Year Clear Go General Help Advanced Search


> Home
 > Simple Search
 > Advanced Search
 > Classification
 > Author Database
 > Journal Database
 > General Help
 > Subscription
 > Contact
 > About Zentralblatt
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 Without specifying a particular search field in the One-Line Search, search is performed over all fields. If you wish to refine your original query, you can do so without leaving the hit list.
 A new feature of ZBMath is MathML, which gives you the opportunity of directly showing mathematical symbols and formulas in your search results.

Query: Go
 Help on query formulation Clear form

Of course, you can also still get the TeX source for each result. If you generally prefer to get your search result displayed in TeX instead of MathML, you can [switch here](#). Further information on MathML is available in our [help](#) section.

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Edited by:

- EMS (European Mathematical Society)
- Heidelberg Academy of Science
- FIZ Karlsruhe

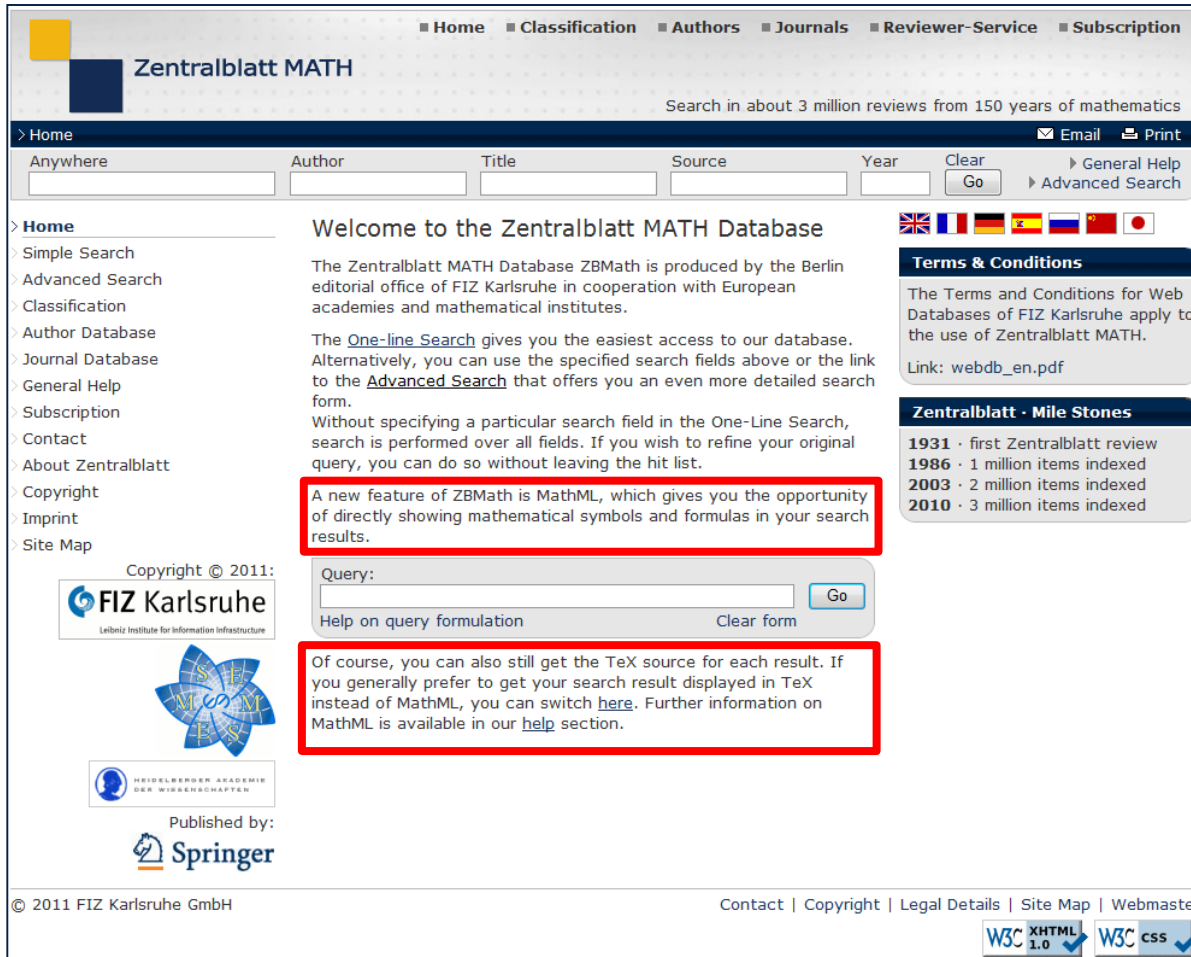
Editor-in-Chief:

Gert-Martin Greuel

Published by:

Springer

Display of Formula Use of MathML or TeX

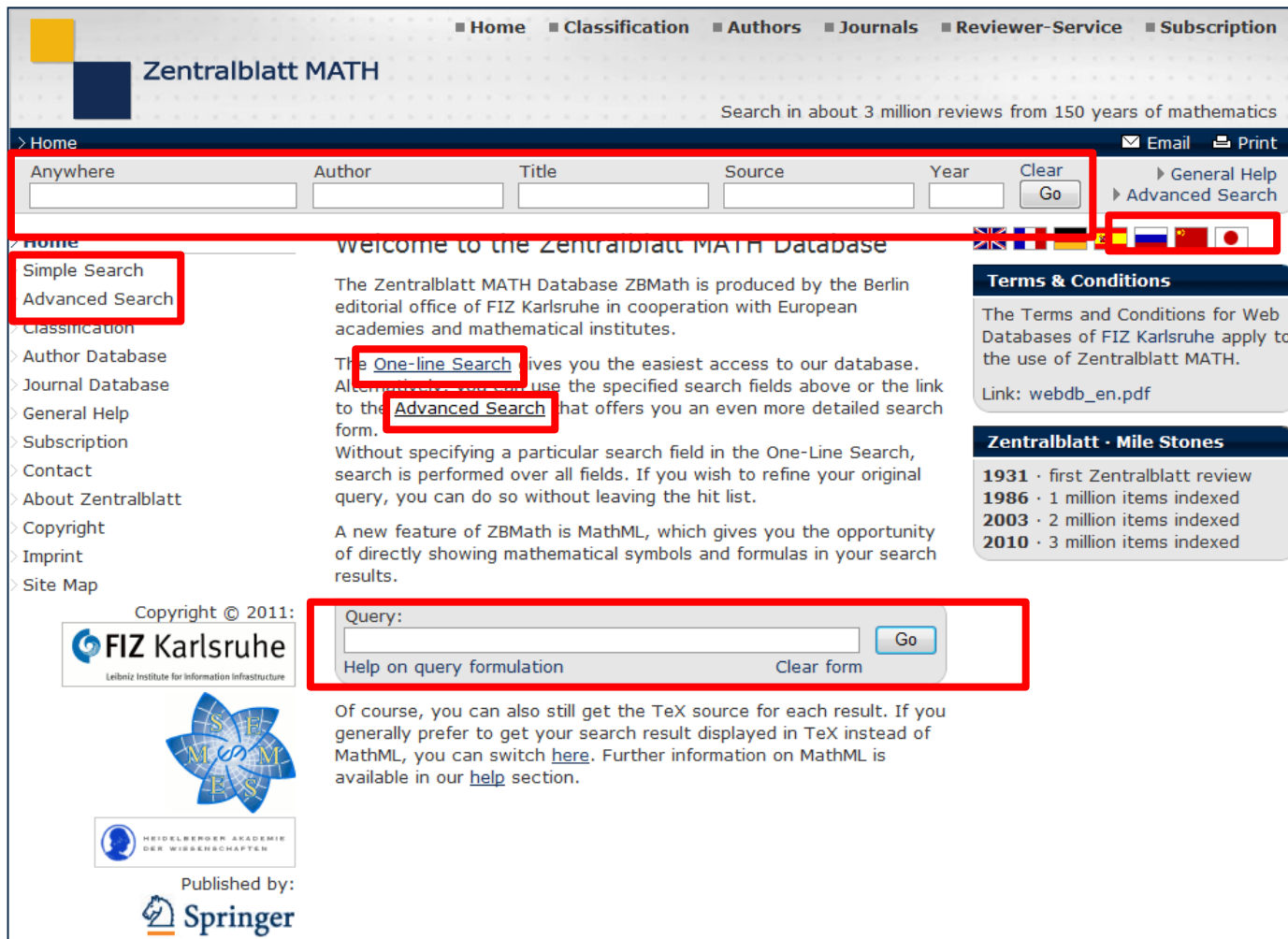


The screenshot shows the Zentralblatt MATH website interface. At the top, there is a navigation menu with links for Home, Classification, Authors, Journals, Reviewer-Service, and Subscription. Below the menu is a search bar with fields for 'Anywhere', 'Author', 'Title', 'Source', and 'Year', along with a 'Clear' button and a 'Go' button. A 'Print' icon is also visible. The main content area features a 'Welcome to the Zentralblatt MATH Database' section, which includes a paragraph about the database's production by the Berlin editorial office of FIZ Karlsruhe. Below this, there is a red-bordered box containing the text: 'A new feature of ZBMath is MathML, which gives you the opportunity of directly showing mathematical symbols and formulas in your search results.' Further down, another red-bordered box states: 'Of course, you can also still get the TeX source for each result. If you generally prefer to get your search result displayed in TeX instead of MathML, you can switch [here](#). Further information on MathML is available in our [help](#) section.' The interface also includes a 'Query:' search box with a 'Go' button and a 'Clear form' link. On the right side, there are sections for 'Terms & Conditions' and 'Zentralblatt - Mile Stones' with a list of years and indexed items: 1931 (first Zentralblatt review), 1986 (1 million items indexed), 2003 (2 million items indexed), and 2010 (3 million items indexed). The footer contains copyright information for FIZ Karlsruhe GmbH, contact details, and logos for W3C XHTML 1.0 and W3C CSS.

Integrated MathML (Mathematics Markup Language) enables immediate display of complex equations and formulas.

If display in TeX is preferred, it's possible too.

Search Possibilities: Search Fields / Advanced Search / One-line Query



The screenshot shows the Zentralblatt MATH website interface. At the top, there is a navigation menu with links for Home, Classification, Authors, Journals, Reviewer-Service, and Subscription. Below this is the Zentralblatt MATH logo and a search bar with fields for 'Anywhere', 'Author', 'Title', 'Source', and 'Year', along with 'Clear' and 'Go' buttons. A red box highlights this search bar area. To the right of the search bar are links for 'General Help' and 'Advanced Search'. Below the search bar is a 'Home' section with a list of navigation links: Simple Search, Advanced Search, Classification, Author Database, Journal Database, General Help, Subscription, Contact, About Zentralblatt, Copyright, Imprint, and Site Map. A red box highlights the 'Simple Search' and 'Advanced Search' links. The main content area features a 'welcome to the Zentralblatt MATH Database' message, followed by a paragraph describing the database. A red box highlights the 'One-line Search' link, and another red box highlights the 'Advanced Search' link. To the right of the main content is a 'Terms & Conditions' section with a link to 'webdb_en.pdf' and a 'Zentralblatt · Mile Stones' section listing key dates: 1931 (first review), 1986 (1 million items indexed), 2003 (2 million items indexed), and 2010 (3 million items indexed). At the bottom left, there is a 'Copyright © 2011: FIZ Karlsruhe' logo and a 'Heidelberg Akademie der Wissenschaften' logo. At the bottom right, there is a 'Published by: Springer' logo. A red box highlights a 'Query:' search bar at the bottom of the page, with 'Go' and 'Clear form' buttons.

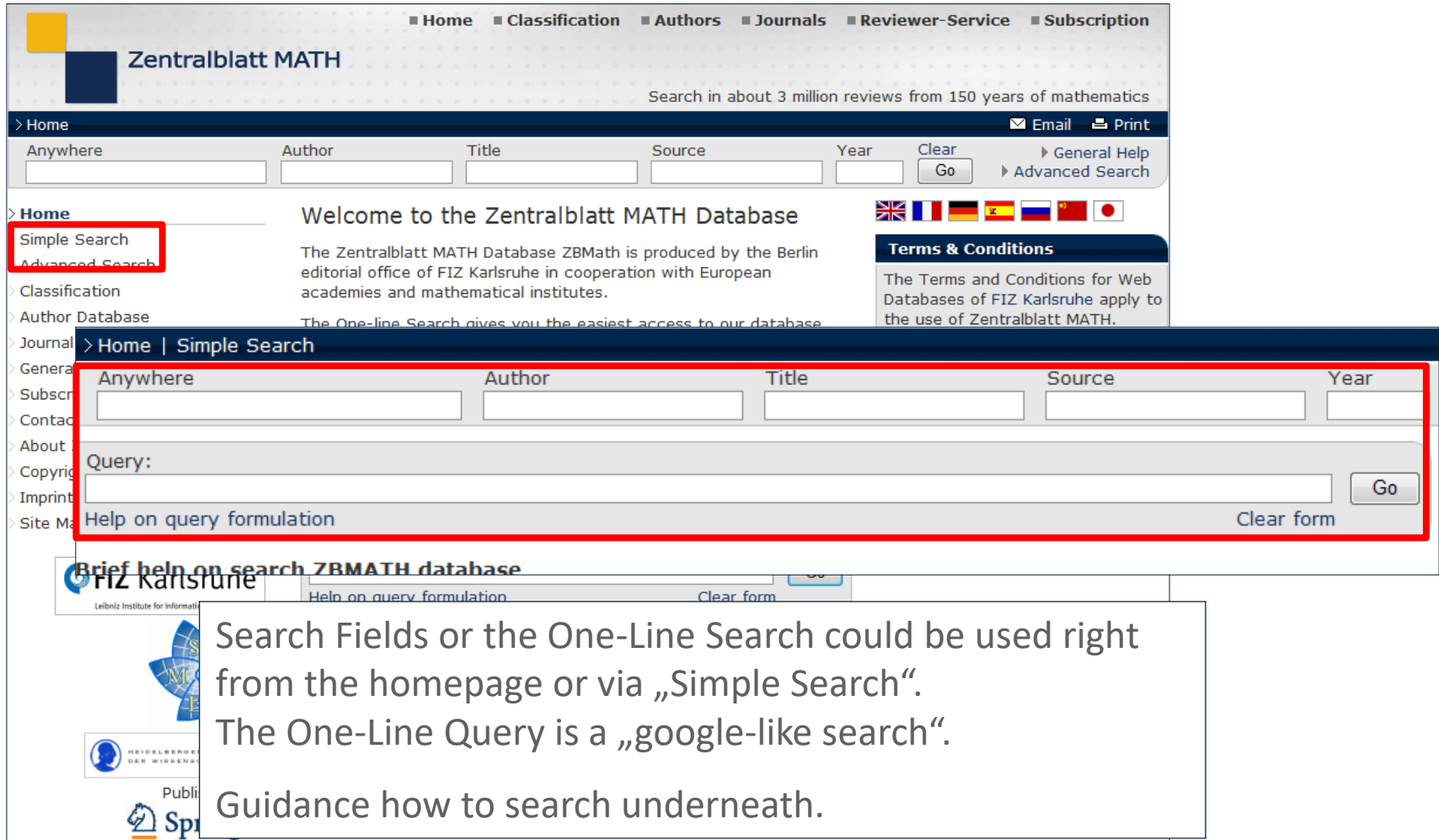
Search Fields

Advanced Search links to an interface with even more search categories and Boolean Operations

One-Line Query

Simple Search: either search with Search Fields or One-Line Search

Simple Search: Search Fields or One-Line Search



The screenshot displays the Zentralblatt MATH website interface. At the top, there are navigation links: Home, Classification, Authors, Journals, Reviewer-Service, and Subscription. Below this is the Zentralblatt MATH logo and a search bar with fields for 'Anywhere', 'Author', 'Title', 'Source', and 'Year', along with a 'Go' button and a 'Clear' link. A 'Simple Search' link is highlighted with a red box in the left sidebar. The main content area includes a 'Welcome to the Zentralblatt MATH Database' message and a 'Terms & Conditions' section. A red box highlights the search fields and the 'Query:' input field. Below the search fields, there is a 'Help on query formulation' link and a 'Clear form' button. A text box at the bottom of the screenshot contains the following text:

Search Fields or the One-Line Search could be used right from the homepage or via „Simple Search“.
The One-Line Query is a „google-like search“.
Guidance how to search underneath.

Advanced Search: more search fields / boolean operations

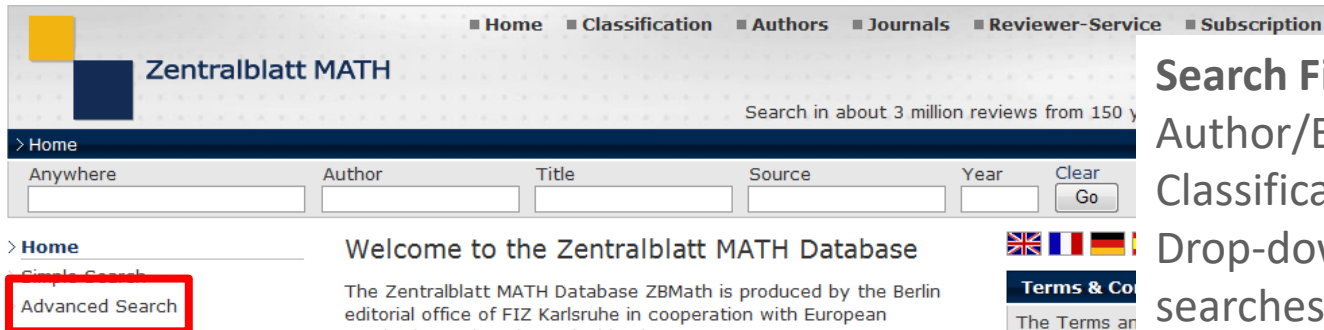
Search Fields: Anywhere, Author/Editor, Title, Source, Classification, Abstract/Review

Drop-downs additionally offer searches for Language, Keyword, Reviewer, Citation, Journal/Serial, Publisher

Boolean Operations: and / or / not

Boolean Operations: and / or / not

Type: Journal / Book / Article



Navigation: Home Classification Authors Journals Reviewer-Service Subscription

Zentralblatt MATH

Search in about 3 million reviews from 150 y

> Home

Anywhere Author Title Source Year Clear Go

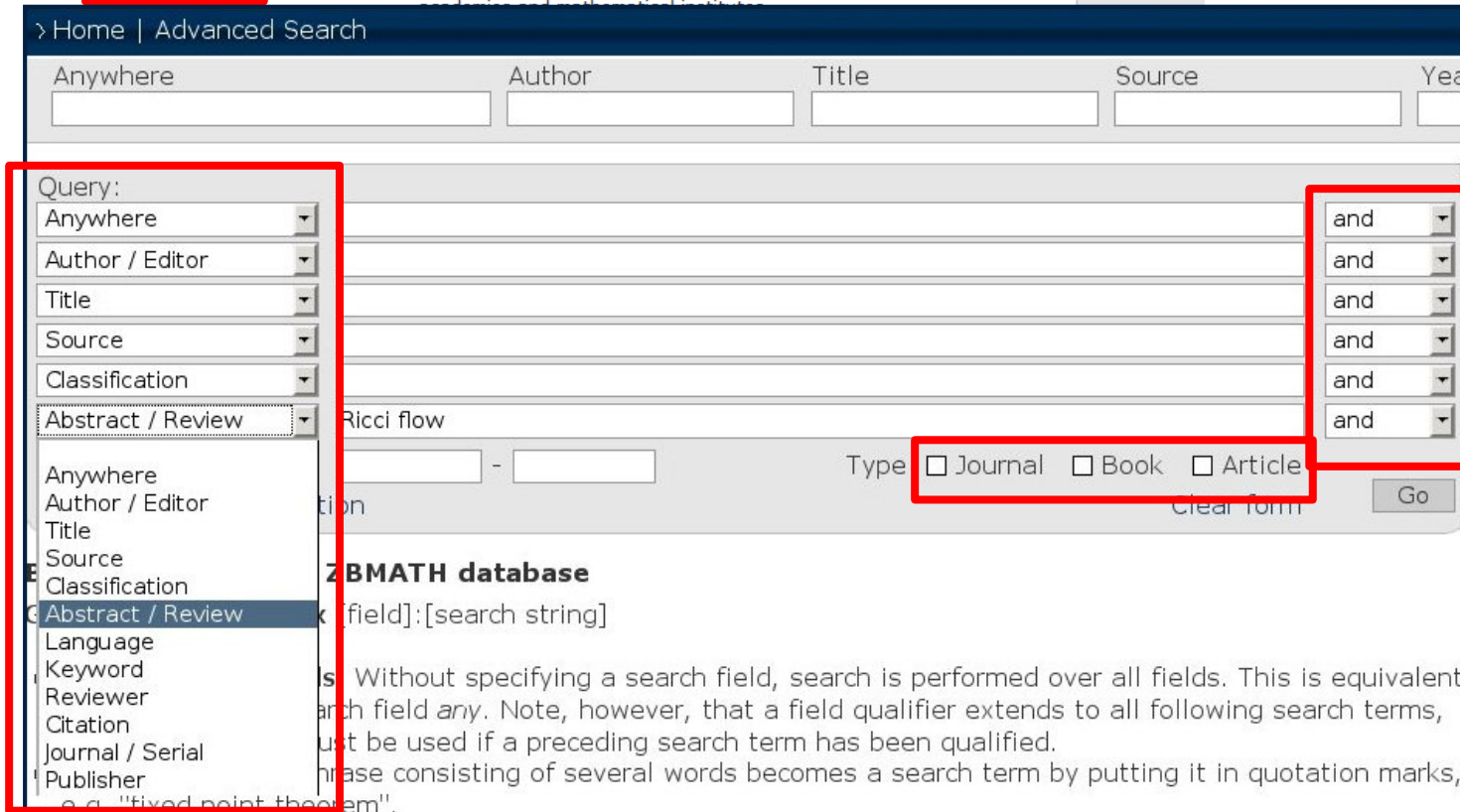
> Home Welcome to the Zentralblatt MATH Database

The Zentralblatt MATH Database ZBMath is produced by the Berlin editorial office of FIZ Karlsruhe in cooperation with European

Terms & Co

The Terms an

Advanced Search



> Home | Advanced Search

Anywhere Author Title Source Year

Query:

Anywhere Author / Editor Title Source Classification Abstract / Review

Anywhere Author / Editor Title Source Classification Abstract / Review Language Keyword Reviewer Citation Journal / Serial Publisher

and and and and and and

Type Journal Book Article

Clear form Go

ZBMATH database

[field]:[search string]

Without specifying a search field, search is performed over all fields. This is equivalent to the search field *any*. Note, however, that a field qualifier extends to all following search terms, and must be used if a preceding search term has been qualified. A phrase consisting of several words becomes a search term by putting it in quotation marks, e.g. "fixed point theorem".

Brief Help on Search

Help on query formulation
Clear form
Go

Brief help on search ZBMATH database

General search syntax [field]:[search string]

- **Default search fields:** Without specifying a search field, search is performed over all fields. This is equivalent to specifying the search field *any*. Note, however, that a field qualifier extends to all following search terms, and therefore *any* must be used if a preceding search term has been qualified.
- **Phrase search:** A phrase consisting of several words becomes a search term by putting it in quotation marks, e.g. "fixed point theorem".
- **Connecting search terms:** To connect search terms, the Boolean operators & (*and*) and | (*or*) may be used. A search for terms connected with & will give all documents containing all these terms, while using | will give all documents containing any of these terms. The operator ^ (*not*) can also be used.
- **Connection default is &:** If the search string contains several words separated by blanks but not put in quotation marks, the query will give all documents containing *all* these words. This is therefore equivalent to connecting the words with the operator & (*and*).
- **Abbreviating search terms:** Right truncation of search terms is possible by placing the * symbol at the end of the search term. To truncate a phrase enclosed in quotation marks, the * must be put **before** the closing quotation mark. This kind of "wildcarding" is possible only at the end (but not within) of a word or phrase; if the * symbol is found within a phrase, it has no effect.

Examples

"einstein manifold"	ti:"cauchy process"*	cc:05C55
"einstein manifold*"	any:eigenvalue*	cc:*05C55
einstein manifold*	au:hirzebruch,f*	an:1089.11026
einstein & manifold*	la:russian	an:05654321
einstein manifold*	rv:dieudonne	
au:einstein, a* & any:manifold*		

Search fields

Field	Description
any	Joint index of all fields.
au	Authors, editors, and author references.
ti	Original and translated titles.
so	Source data, including journal or serial title, volume and issue number, pagination, publisher, and publication year.
cc	Mathematics Subject Classification (MSC 2010). The symbol * in front of an MSC code means primary classification.
ut	Keywords (Uncontrolled terms not from a controlled vocabulary).
py	Publication year(s).
la	Languages and ISO 639-1 alpha-2 language codes.
dt	Document types: (j, b, a) j → journal article; b → book; a → book article
an	Zentralblatt MATH identifier and document (DE) number.
rv	Reviewers.

Help on Simple and Advanced Search sites.

Free logic combination of facets possible for refining / enlarging search results including additional search options: language, publisher, keywords, ISBN, DOI

Search History

Query: Go
 Help on query formulation Clear form

Result 1 to 20 of 691 total Show marked items

1 **Zbl 05968481 Hsu, Shu-Yu**
Lower bound for the scalar curvature of the standard solution of the Ricci flow. (English)
Int. Math. Forum 6, No. 17-20, 829-835 (2011).
 MSC 2010: 58J35 53C44 58C99

2 **Zbl 05959532 Fillastre, François; Izmestiev, Ivan**
Gauss images of hyperbolic cusps with convex polyhedral boundary. (English)
Trans. Am. Math. Soc. 363, No. 10, 5481-5536 (2011).
 MSC 2010: 57M50 52A55 52C26 52C25

arXiv.org Preprints
 Try this retrieval query in arXiv.org.

History

1	ricci flow	691
2	inventiones ricci flow	9
3	inventiones ricci	51
4	inventiones	3740

1 **Zbl 1130.53003 Perelman, Grisha**
Finite extinction time for the solutions to the Ricci flow on certain three-manifolds. (English)
arXiv e-print service, Cornell University Library, Paper No. 0307245, 7 p., electronic only (2003)
 MSC 2010: 53-02 53C44 53C21 57M40 57R60 · Reviewer: Gérard Besson (Grenoble)

History

1	au:perelman grisha	9
2	ricci flow	691
3	inventiones ricci flow	9
4	inventiones ricci	51
5	inventiones	3740

Visualization of the Search History facilitates modifications or refinements of searches.

Search Results

Query: ricci flow
Help on query formulation Clear form

Result 1 to 20 of 691 total ||<< 1 21 41 61 81 101 >>||

[Zbl 05968481 Hsu, Shu-Yu](#)
Lower bound for the scalar curvature of the standard solution of the Ricci flow. (English)
 Int. Math. Forum 6, No. 17-20, 829-835 (2011).
 MSC 2010: 58J35 53C44 58C99

[Zbl 05959532 Fillastre, François; Izmistiev, Ivan](#)
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arXiv.org Preprints
 Try this retrieval query in arXiv.org.

History

1	ricci flow	691
2	inventiones ricci flow	9
3	inventiones ricci	51
4	inventiones	3740

- Total number of results shown
- Display of results ordered chronologically from newest to oldest; the user can easily jump to older results or check the first item found by the search
- ALL which is written in BLUE is clickable and links to one result or further searches
- Click on a result / the Zbl number -> full review, full text
- Click on author -> all items in ZBMATH by this author
- Click on journal -> all articles of this journal
- Click on MSC2010 code -> all items listed under this special code

Results – quick check if there is a subscription to the source to check the full text via OpenURL /SFX e.g. MPG

The image shows a screenshot of the Zentralblatt MATH website search results and a detailed view of the MPG SFX Services interface. The search results list five entries, with the first one highlighted. The MPG SFX Services interface is shown in a separate window, providing detailed information about the selected article, including the title, source, full text availability, and various links for accessing the full text.

Zentralblatt MATH Search Results:

- Result 1 to 20 of 3748 total
- Search Query: `inventiones`
- Result 1: [MATRIX] Zbl_1234.35318 Andersson, John; Shahgholian, Henrik; Weiss, Georg S. On the singularities of a free boundary through Fourier expansion. (English) *Invent. Math.* 187, No. 3, 535-587 (2012). MSC 2010: 35R35 35B40 35J60
- Result 2: [MATRIX] Zbl_06021979 G'erard, Patrick; Grellier, Sandrine Invariant tori for the cubic Szeg'o equation. (English) *Invent. Math.* 187, No. 3, 707-754 (2012). MSC 2010: 35B15 37K15 47B35
- Result 3: [MATRIX] Zbl_06021978 Sznitman, Alain-Sol Decoupling inequalities and interlacement percolation on $G \times \mathbb{Z}$. (English) *Invent. Math.* 187, No. 3, 645-706 (2012). MSC 2010: 60Kxx
- Result 4: [MATRIX] Zbl_06021977 Pop, Florian On the birational anabelian program initiated by Bogomolov. I. (English) *Invent. Math.* 187, No. 3, 511-533 (2012). MSC 2010: 14Hxx 12Exx 14Exx 14Jxx 12E30 14E99 14H30 14J99
- Result 5: [MATRIX] Zbl_06021976 Lin, Fanghua Erratum: On the Dirichlet problem for minimal graphs in hyperbolic space. (English) *Invent. Math.* 187, No. 3, 755-757 (2012). MSC 2010: 35B65 35J65

MPG SFX - Services Interface:

- Title:** On the singularities of a free boundary through Fourier expansion.
- Source:** *Inventiones mathematicae* [0020-9910, 1432-1297] yr:2012 vol:187 iss:3 pg:535
- Full Text:** Full text available via [SpringerLink](#)
- Year:** [2012] **Volume:** [187] **Issue:** [3] **Start Page:** [535]
- Your IP address wasn't identified as belonging to the MPG range:** Redirect request to a local link resolver via [OCLC's World](#)
- Author:** Check for articles by this author in [Web of Science](#)
- Journal:** Check for this journal in the [Electronic Journal Library](#); Information on this journal in [Journal Citation Reports](#); RSS feed for table of contents via [ticTOCs](#); Information on this journal in [Ulrichsweb](#)
- Cited References & more:** View this record in [Elsevier Scopus](#)
- Help & Feedback:** Send us your comments using the [MPG/SFX Feedback](#); For questions related to SFX please check the [MPG/SFX](#); Display reference in [Citation Style \(BibTex, APA, etc.\)](#)
- Web Search:** Find related information in [Web Search Engine](#)

Search Results – Link to Source / Downloading

Query: ricci flow
 Help on query formulation Clear form

Result 1 to 20 of 691 total Show marked Items 1 21 41 61 81 101

[Zbl 05968481 Hsu, Shu-Yu](#)
Lower bound for the scalar curvature of the standard solution of the Ricci flow. (English)
 Int. Math. Forum 6, No. 17-20, 829-835 (2011).
 MSC 2010: 58J35 53C44 58C99

[Zbl 1130.53003 Perelman, Grisha](#)
Finite extinction time for the solutions to the Ricci flow on certain three-manifolds. (English)
 arXiv e-print service, Cornell University Library, Paper No. 0307245, 7 p., electronic only (2003)

Download/Link Options:

- PDF XML AMS-TeX TEXT **BibTeX** Web Link
- PDF XML AMS-TeX TEXT **BibTeX** Full Text
- PDF XML AMS-TeX TEXT **BibTeX** **arXiv.org**

arXiv.org Preprints
 Try this retrieval query in arXiv.org.

History

1	ricci flow	691
2	inventiones ricci flow	9
3	inventiones ricci	51
4	inventiones	3740

History

1	au:perelman grisha	9
2	ricci flow	691
3	inventiones ricci flow	9
4	inventiones ricci	51
5	inventiones	3740

All entries link back to their original source allowing seamless checking without leaving ZBMATH. The source might be Full Text, a Web Link or a link to arXiv.org or other open repositories. Links to open repositories are written in GREEN.

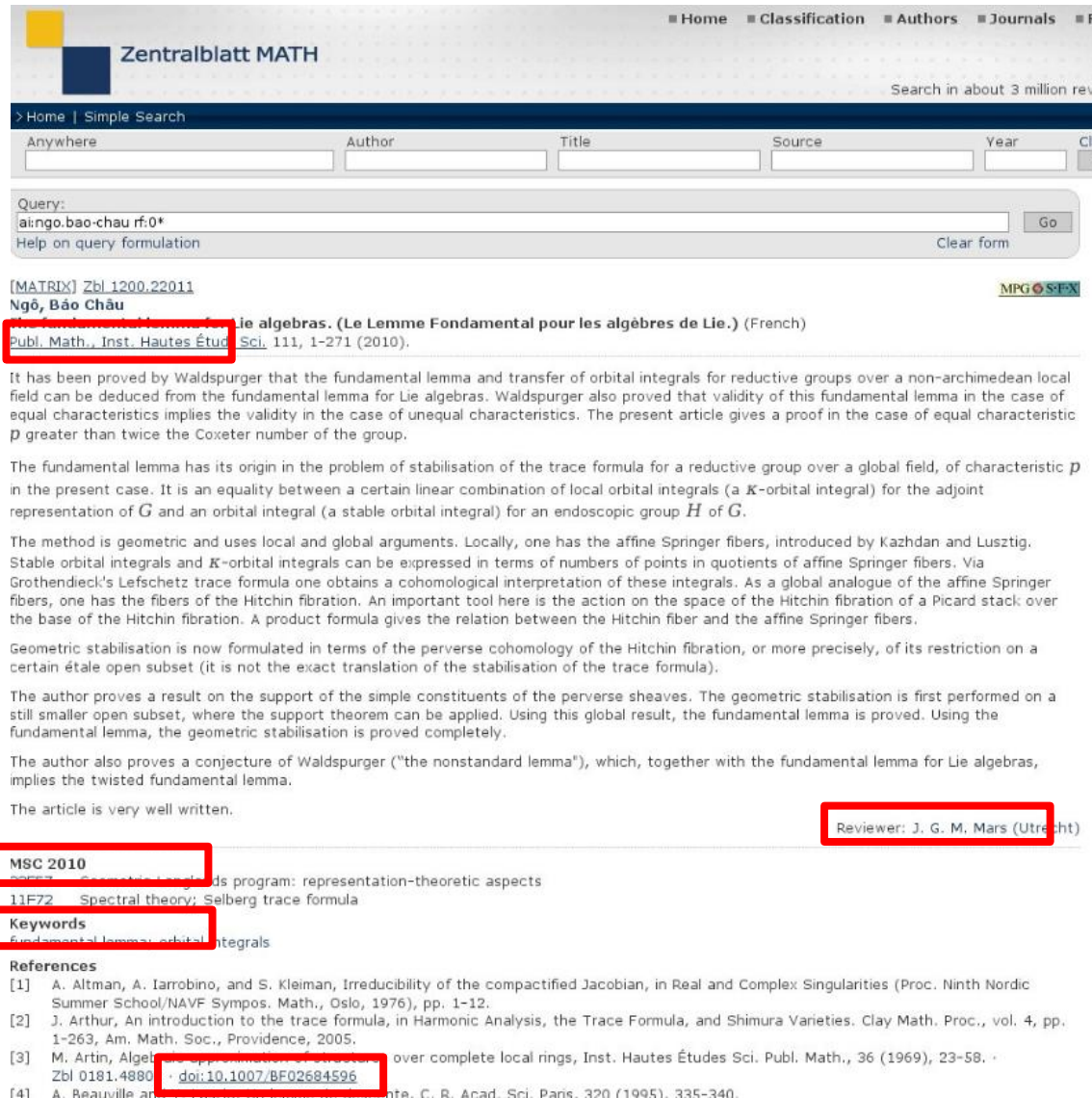
Downloading of search results offered in different formats: PDF, XML, etc.

Download of reference in BibTeX and other formats for own reference lists.

Result – Single Item e.g. Review

Single items even offer further searches for the:

- Journal
- Reviewer
- MSC code
- Keyword
- Link to cited articles



[Home](#) [Classification](#) [Authors](#) [Journals](#) [Re](#)

Zentralblatt MATH

Search in about 3 million reviews

> Home | Simple Search

Anywhere Author Title Source Year Clear

Query: ai.ngo.bao-chau rf:0*

Help on query formulation

[MATRIX] Zbl 1200.22011 [MPG](#) [SFX](#)

Ngô, Bảo Châu

Fundamental lemma for Lie algebras. (Le Lemme Fondamental pour les algèbres de Lie.) (French)
 Publ. Math., Inst. Hautes Étud. Sci., 111, 1–271 (2010).

It has been proved by Waldspurger that the fundamental lemma and transfer of orbital integrals for reductive groups over a non-archimedean local field can be deduced from the fundamental lemma for Lie algebras. Waldspurger also proved that validity of this fundamental lemma in the case of equal characteristics implies the validity in the case of unequal characteristics. The present article gives a proof in the case of equal characteristic p greater than twice the Coxeter number of the group.

The fundamental lemma has its origin in the problem of stabilisation of the trace formula for a reductive group over a global field, of characteristic p in the present case. It is an equality between a certain linear combination of local orbital integrals (a K -orbital integral) for the adjoint representation of G and an orbital integral (a stable orbital integral) for an endoscopic group H of G .

The method is geometric and uses local and global arguments. Locally, one has the affine Springer fibers, introduced by Kazhdan and Lusztig. Stable orbital integrals and K -orbital integrals can be expressed in terms of numbers of points in quotients of affine Springer fibers. Via Grothendieck's Lefschetz trace formula one obtains a cohomological interpretation of these integrals. As a global analogue of the affine Springer fibers, one has the fibers of the Hitchin fibration. An important tool here is the action on the space of the Hitchin fibration of a Picard stack over the base of the Hitchin fibration. A product formula gives the relation between the Hitchin fiber and the affine Springer fibers.

Geometric stabilisation is now formulated in terms of the perverse cohomology of the Hitchin fibration, or more precisely, of its restriction on a certain étale open subset (it is not the exact translation of the stabilisation of the trace formula).

The author proves a result on the support of the simple constituents of the perverse sheaves. The geometric stabilisation is first performed on a still smaller open subset, where the support theorem can be applied. Using this global result, the fundamental lemma is proved. Using the fundamental lemma, the geometric stabilisation is proved completely.

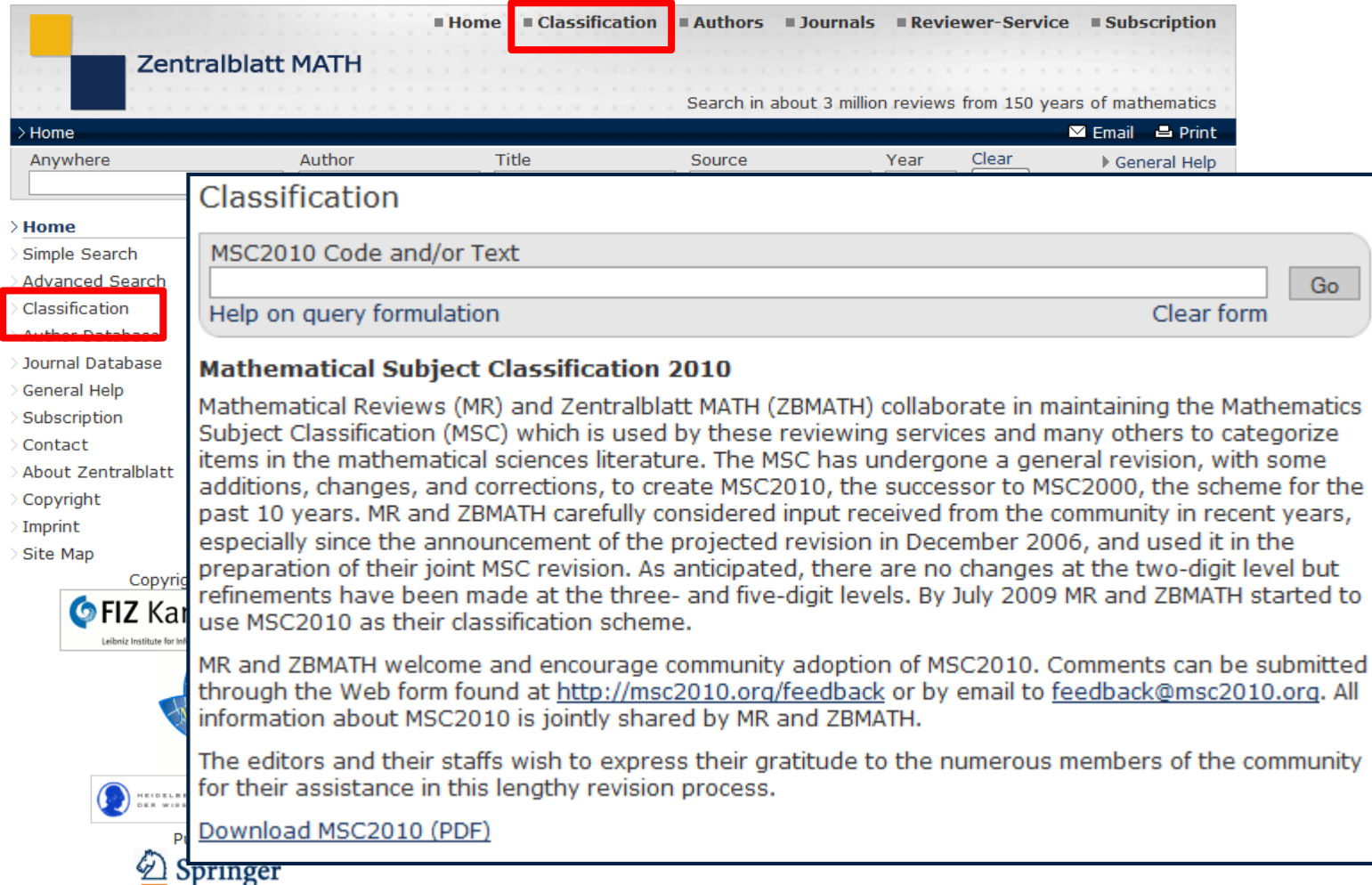
The author also proves a conjecture of Waldspurger ("the nonstandard lemma"), which, together with the fundamental lemma for Lie algebras, implies the twisted fundamental lemma.

The article is very well written.

Reviewer: J. G. M. Mars (Utrecht)

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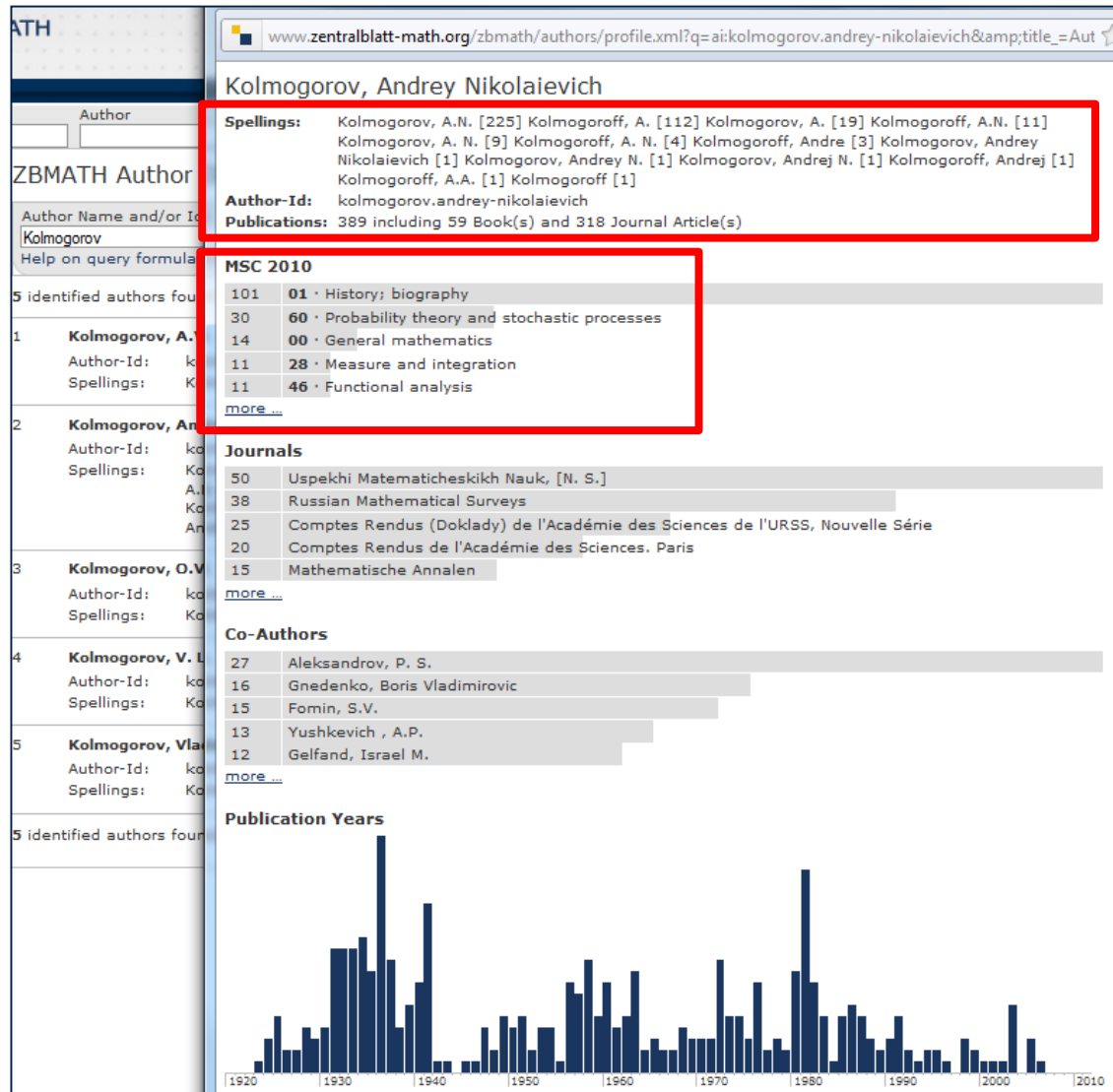
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Spellings: Kolmogorov, A.N. [225] Kolmogoroff, A. [112] Kolmogorov, A. [19] Kolmogoroff, A.N. [11] Kolmogorov, A. N. [9] Kolmogoroff, A. N. [4] Kolmogoroff, Andre [3] Kolmogorov, Andrey Nikolaievich [1] Kolmogorov, Andrey N. [1] Kolmogorov, Andrej N. [1] Kolmogoroff, Andrej [1] Kolmogoroff, A.A. [1] Kolmogoroff [1]

Author-Id: kolmogorov.andrey-nikolaievich

Publications: 389 including 59 Book(s) and 318 Journal Article(s)

MSC 2010

101	01	History; biography
30	60	Probability theory and stochastic processes
14	00	General mathematics
11	28	Measure and integration
11	46	Functional analysis

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Journals

50	Uspekhi Matematicheskikh Nauk, [N. S.]
38	Russian Mathematical Surveys
25	Comptes Rendus (Doklady) de l'Académie des Sciences de l'URSS, Nouvelle Série
20	Comptes Rendus de l'Académie des Sciences, Paris
15	Mathematische Annalen

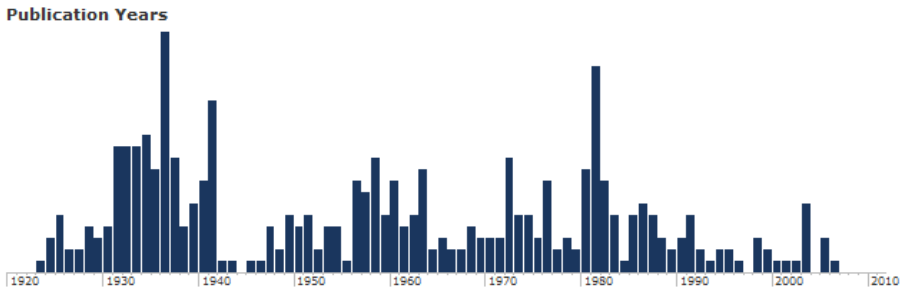
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Co-Authors

27	Aleksandrov, P. S.
16	Gnedenko, Boris Vladimirovic
15	Fomin, S.V.
13	Yushkevich, A.P.
12	Gelfand, Israel M.

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Publication Years

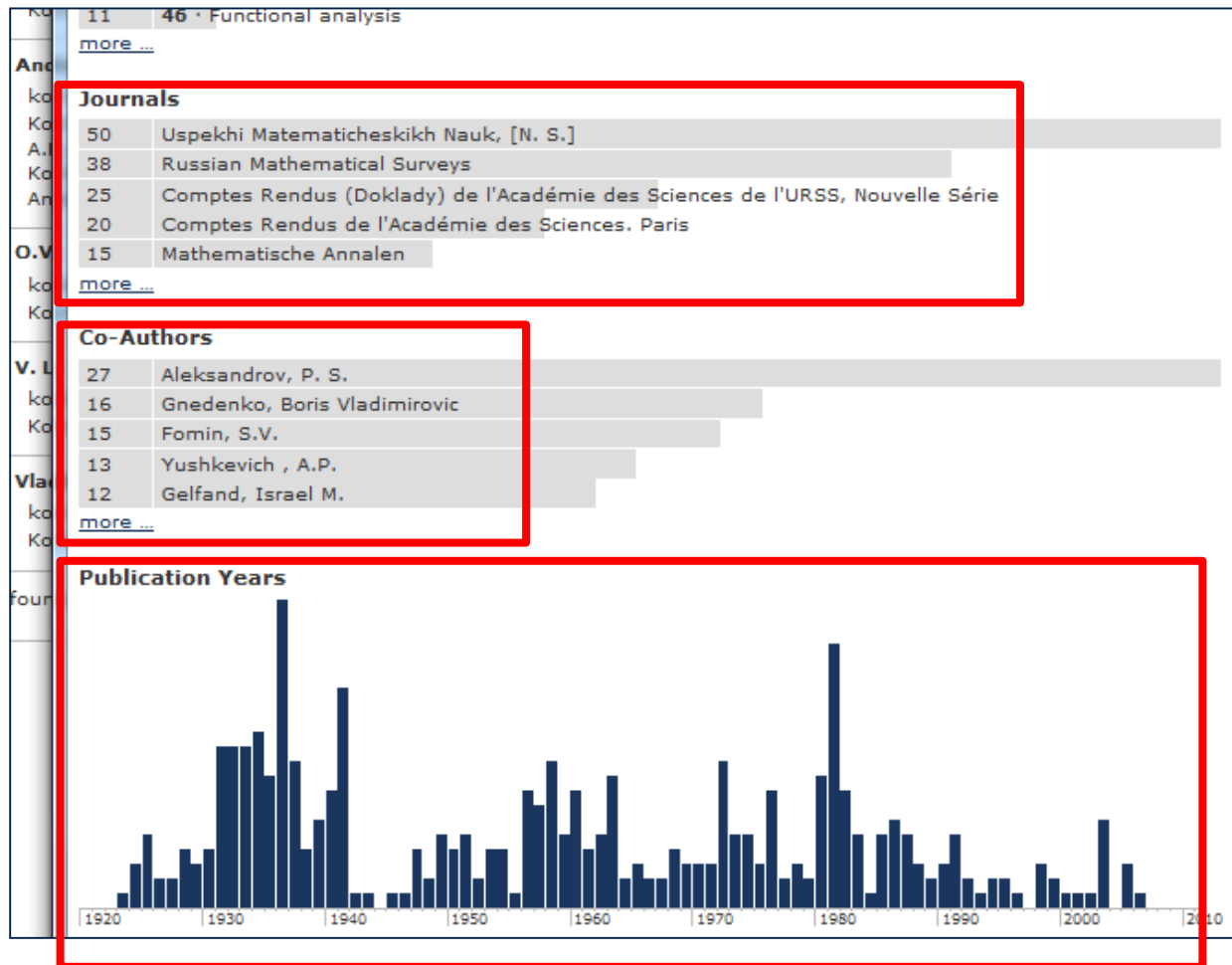


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MSC2010 codes classifying the author’s publications sorted by number (5 most frequent, but option to display “more”)

Author Profile (2)



Journals in which the author published sorted by number (5 most frequent, but option to display “more”)

Co-Authors names sorted by frequency of co-authorship; co-authors names are hyperlinked to their author’s profile (5 most frequent, but option to display “more”)

Publication Years displayed in a bar chart for an at a glance overview

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
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- **br** biographical references
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- **rv** reviewer
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- **ti** title
- **so** source
- **py** publication year
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