

On Becoming an Expert...

Rutger de Jong, Subject Librarian Science | BSc MI

28-02-2018



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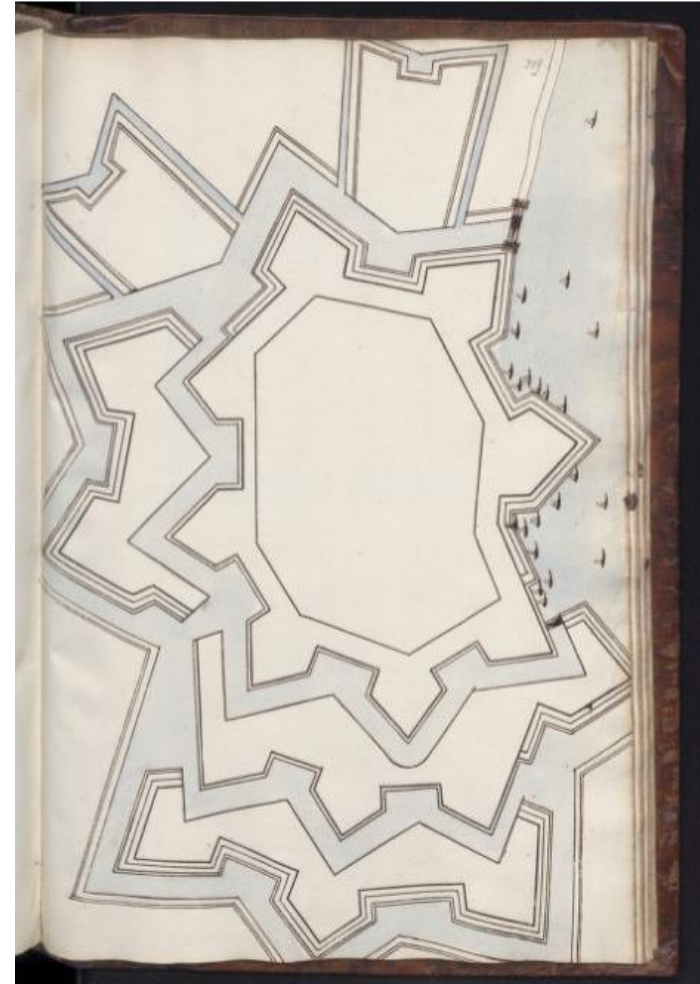
Program

- Introduction
- Scholarly communication
- Searching information in 5 steps
- Referencing



The University Library by Numbers

- Over 7 locations, desks in Jakarta and Rabat
- 120 fte
- Circa 2 million ebooks
- Over 5 million printed books
- Over 40.000 e-journals
- Over 600 databases
- Large collection of historically important materials



Schooten, F. (1600). *Uitgewerkte Voorstellen Van Theoretische En Toegepaste Meetkunde, Opgehelderd Door Net Geconstrueerde Teekeningen.*

Science & communication

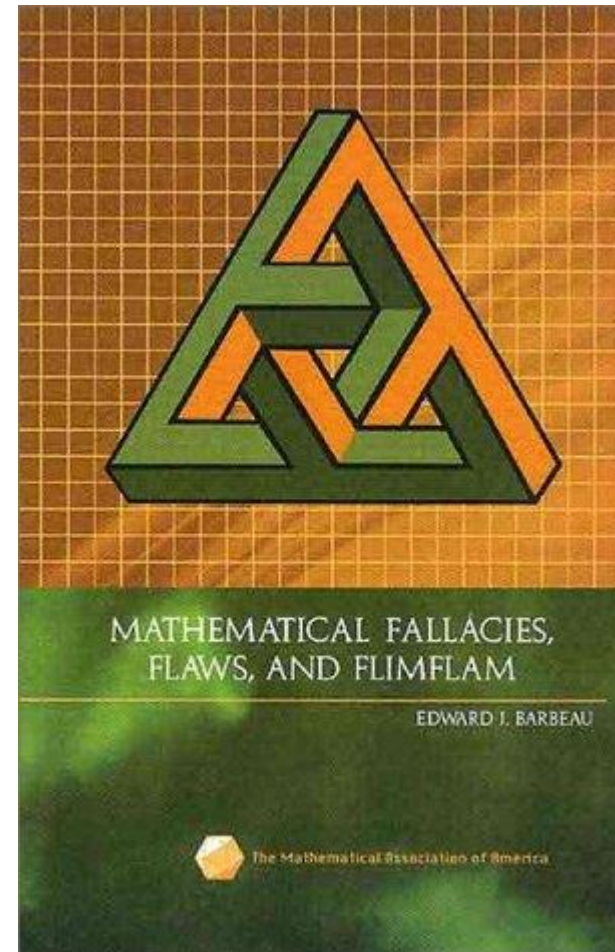
Non-scientific

- Magazines: popular/trade (Plus Magazine, Mathematics Magazine)
- Websites
- Encyclopedia
- Books

Scientific

- Conference proceedings
- Journal articles (peer-reviewed)
- Books
- Datasets

Wikipedia?



Is any source good for Science?

Why (not) Wikipedia?

Use Wikipedia for:

- General knowledge
- Getting ideas for search terms
- Pointers to relevant literature

Not for:

- Scientific reference

Also of interest:

<https://www.encyclopediaofmath.org>

The screenshot shows the Wikipedia page for 'WikiProject Mathematics'. At the top, it says 'Wikipedia:WikiProject Mathematics' and 'From Wikipedia, the free encyclopedia'. There are navigation tabs for 'Project page', 'Talk', 'Read', 'Edit', and 'View history', along with a search box. The main content area is a table with two columns. The left column contains the text 'Elementgermanium (T C)' and 'D.Lazard (T C)'. The right column contains the text 'Anything math-related except calculus, geometry and advanced algebra.' and 'Emeritus professor in mathematics and computer science'. A user comment is overlaid on the right side of the table, reading: 'I am 9, i am in 6th grade because i skipped 2 grades due to my math skills. Awesome at math, especially in inventing names for HUGE numbers. ever heard of the googolunvigintilplex? i invented the name! someone might have come up with it before me but i thought of it on my own.' Below the table, there are 'Tools' links: 'What links here', 'Related changes', 'Upload file', and 'Special pages'. At the bottom, there are links for 'Download as PDF', 'Printable version', 'Some issues to think about', and 'Conventions'. On the right side, there is a section for 'The tesseract, the four-dimensional analog of the cube.' with a link to an animated version. Below that is a 'Resources' section with a link to the 'Mathematics portal'.

Anyone can edit!

How Publishing Works

I send in my paper and then...

Journal	First decision submission to first decision in weeks	Review speed submission to final decision in weeks	First online acceptance to citable online in weeks
Applied and Computational Harmonic Analysis ↗	15.70	20.83	1.02
Applied Mathematical Modelling ↗	25.30	33.15	2.73
Applied Mathematics and Computation ↗	28.08	30.86	4.42
Applied Mathematics Letters ↗	1.30	1.59	1.95
Applied Numerical Mathematics ↗	20.62	29.27	4.57
Computational Statistics and Data Analysis ↗	9.34	14.35	1.69
Computers and Mathematics with Applications ↗	6.06	7.83	3.74
Differential Geometry and its Applications ↗	16.09	17.70	3.26
Discrete Applied Mathematics ↗	25.32	32.67	3.58
Discrete Optimization ↗	14.35	26.19	3.88
Finite Fields and Their Applications ↗	15.55	21.62	4.96

Reasons for Delay: Peer Review

Not Normal: the uncertainties of scientific measurements

David C. Bailey

Published 11 January 2017. DOI: 10.1098/rsos.160600

Article Figures & Data Info & Metrics **Review History** PDF

160600.reviewer-comments.pdf 1 / 21

Review form: Reviewer 1 (Maurice Cox)

Is the manuscript scientifically sound in its present form?
No

Are the interpretations and conclusions justified by the results?
No

Is the language acceptable?
No

Is it clear how to access all supporting data?
Yes.

Do you have any ethical concerns with this paper?
No

Have you any concerns about statistical analyses in this paper?
Yes

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Next >

January 2017



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Search this issue

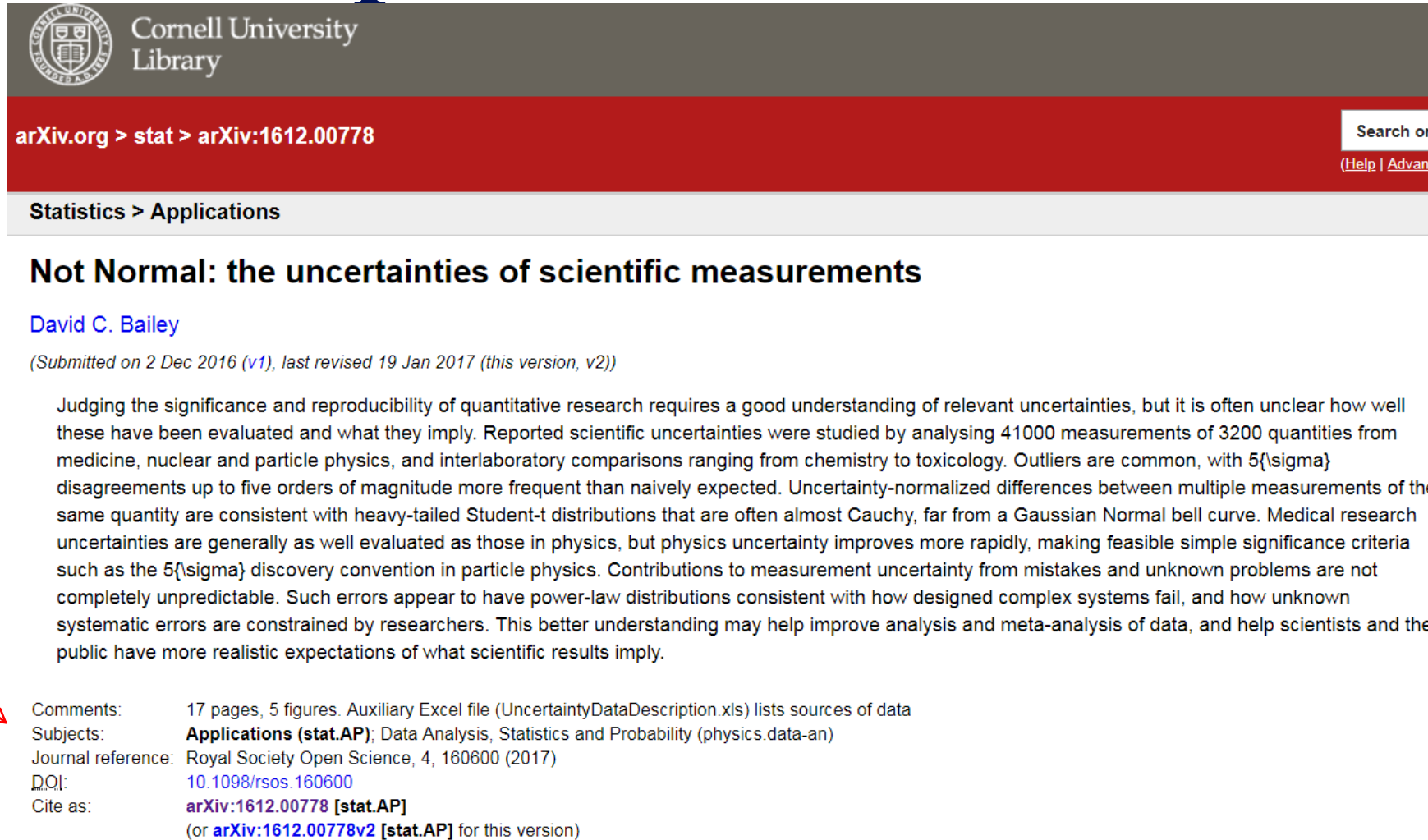


KEYWORDS

I Just Can't Wait: Preprints

www.Arxiv.org

- Rough author's version
 - Pre-print: before peer-review
 - Post-print: after peer-review
- Follow trends
- Receive comments to incorporate in final manuscript
- Should mention if accepted/published
- If we do not have a subscription to an article, this will be a place to find a readable version



The screenshot shows the arXiv preprint page for the paper "Not Normal: the uncertainties of scientific measurements" by David C. Bailey. The page is from the Cornell University Library and is categorized under "Statistics > Applications". The paper was submitted on 2 Dec 2016 (v1) and last revised on 19 Jan 2017 (this version, v2). The abstract discusses the significance and reproducibility of quantitative research, noting that reported scientific uncertainties were studied by analyzing 41,000 measurements of 3,200 quantities from various fields. It highlights that outliers are common and that uncertainty-normalized differences between multiple measurements of the same quantity are consistent with heavy-tailed Student-t distributions, far from a Gaussian Normal bell curve. The paper also notes that medical research uncertainties are generally as well evaluated as those in physics, but physics uncertainty improves more rapidly, making feasible simple significance criteria such as the 5-sigma discovery convention in particle physics. Contributions to measurement uncertainty from mistakes and unknown problems are not completely unpredictable. Such errors appear to have power-law distributions consistent with how designed complex systems fail, and how unknown systematic errors are constrained by researchers. This better understanding may help improve analysis and meta-analysis of data, and help scientists and the public have more realistic expectations of what scientific results imply.

Comments: 17 pages, 5 figures. Auxiliary Excel file (UncertaintyDataDescription.xls) lists sources of data
Subjects: **Applications (stat.AP)**; Data Analysis, Statistics and Probability (physics.data-an)
Journal reference: Royal Society Open Science, 4, 160600 (2017)
DOI: [10.1098/rsos.160600](https://doi.org/10.1098/rsos.160600)
Cite as: **arXiv:1612.00778 [stat.AP]**
(or **arXiv:1612.00778v2 [stat.AP]** for this version)

Once I Get Published: Findability

- It may take >2 months before it appears in databases such as Web of Science or Google Scholar
- Send press releases, update profile
- Databases add value
 - Provide keywords
 - Classify in research field
 - Quality control (journal level)
 - Indexes references and citations
 - Add reviews (in mathematics)

Not Normal: the uncertainties of scientific measurements

By: Bailey, DC (Bailey, David C.)^[1]

ROYAL SOCIETY OPEN SCIENCE

Volume: 4 Issue: 1

Article Number: 160600

DOI: 10.1098/rsos.160600

Published: JAN 2017

[View Journal Impact](#)

Abstract

Judging the significance and reproducibility of quantitative research requires a good understanding of relevant uncertainties, but it is often unclear how well these have been evaluated and what they imply. Reported scientific uncertainties were studied by analysing 41 000 measurements of 3200 quantities from medicine, nuclear and particle physics, and interlaboratory comparisons ranging from chemistry to toxicology. Outliers are common, with 5s disagreements up to five orders of magnitude more frequent than naively expected. Uncertainty-normalized differences between multiple measurements of the same quantity are consistent with heavy-tailed Student's t-distributions that are often almost Cauchy, far from a Gaussian Normal bell curve. Medical research uncertainties are generally as well evaluated as those in physics, but physics uncertainty improves more rapidly, making feasible simple significance criteria such as the 5s discovery convention in particle physics. Contributions to measurement uncertainty from mistakes and unknown problems are not completely unpredictable. Such errors appear to have power-law distributions consistent with how designed complex systems fail, and how unknown systematic errors are constrained by researchers. This better understanding may help improve analysis and meta-analysis of data, and help scientists and the public have more realistic expectations of what scientific results imply.

Keywords

Author Keywords: measurement uncertainty; research reproducibility; systematic errors; complex systems; meta-analysis; metrology

KeyWords Plus: POWER-LAW; AVOGADRO CONSTANT; PARTICLE PHYSICS; MOLAR VOLUME; DISTRIBUTIONS; ERROR; STATISTICS; SYSTEMS; REPRODUCIBILITY; STANDARDS

Citation Network

In Web of Science Core Collection

2

Times Cited

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All Times Cited Counts

2 in All Databases

[See more counts](#)

103

Cited References

[View Related Records](#)

Most recently cited by:

Camarillo, Tia; Mathur, Varun; Mitchell, Tyler, et al
Median Statistics Estimate of the Distance to the Galactic Center
PUBLICATIONS OF THE
ASTRONOMICAL SOCIETY OF THE

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AMERICAN MATHEMATICAL SOCIETY
MathSciNet
Mathematical Reviews

ISSN 2167-5163

University of Leiden



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Select alternative format ▾

Publications results for "Items authored by Bailey, David C."

MR3621394 Indexed

Bailey, David C.(3-TRNT-P)

Not normal: the uncertainties of scientific measurements. (English summary)

R. Soc. Open Sci. 4 (2017), no. 1, January, 160600, 19 pp.

62A99

[Review PDF](#) | [Clipboard](#) | [Journal](#) | [Article](#) | [Make Link](#)

Citations

From References: 0

From Reviews: 0

[Previous](#) [Up](#) [Next](#)



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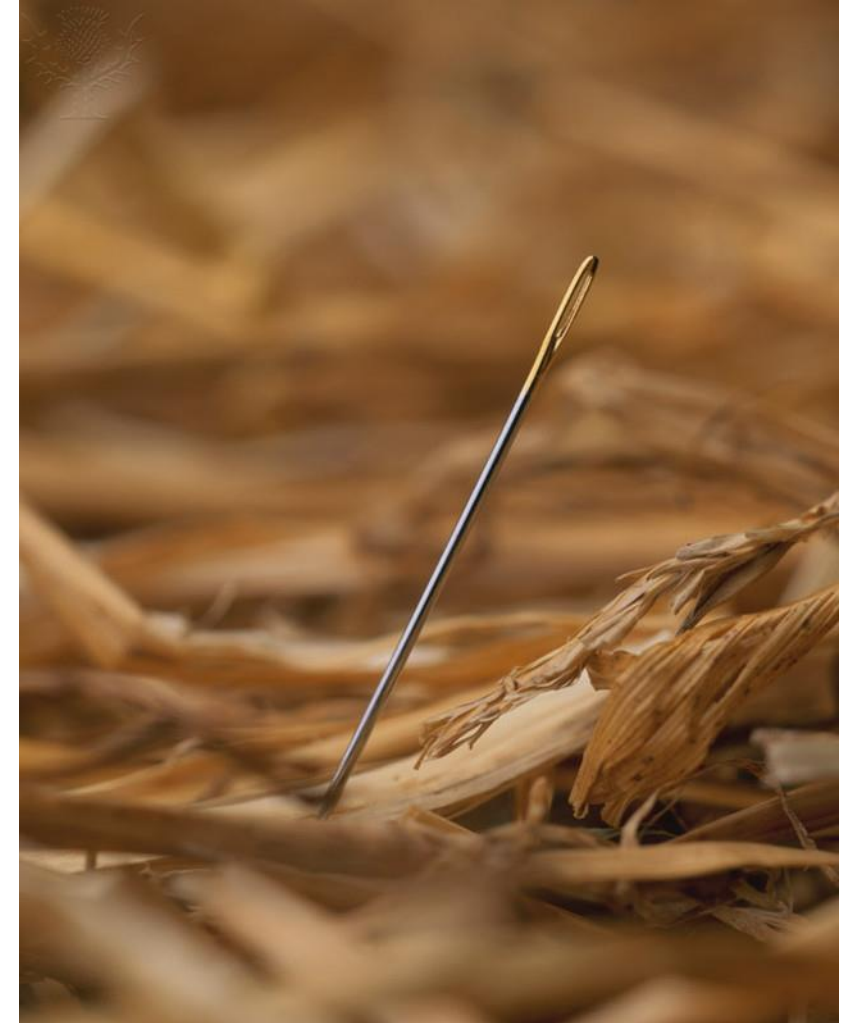
Why Did My Publication Get Through QC

Criteria	
Intended audience	Scientists
Objectivity	Yes
Author and affiliation	Expert in the field
Recent publication	Yes
Publisher / Journal	Academic / high impact
References	Yes
Peer-reviewed	Yes
Primary or secondary research	First hand (p)

These criteria help you recognize scholarly articles/ and books

Finding information in 5 steps

- What information do I need?
- What information resources are available?
- How do I build a solid search strategy?
- How do I evaluate the results?
- How do I use the information in my research?



REX A.BUTCHER / SEBUN PHOTO / amanaimages / Universal Images Group


Step 1: Information Needs

- Do a broad search to get acquainted with the topic
- Decide what material is appropriate:
 - Books
 - Journal articles
 - Data

18.

“If we all go for the blonde and block each other, not a single one of us is going to get her. So then we go for her friends, but they will all give us the cold shoulder because no one likes to be second choice. But what if none of us goes for the blonde? We won't get in each other's way and we won't insult the other girls. It's the only way to win. It's the only way we all get laid.”

Identify the famous mathematician who describes one of the most revolutionary mathematical principles in the above speech. He's the subject of a very famous Hollywood movie released back in 2001.



Nash equilibria

Step 2: Information Resources

UB Catalogue (books, databases)

Mathematical databases

MathSciNet
ZentralBlatt MATH

Project Euclid

When: looking for
mathematical publications

Scientific databases

Arxiv.org (pre-print physics,
mathematics and computer
sciences)

Eric (education)

Google Scholar (general)

Web of Science (general)

When: looking for articles
on mathematics and its
applications

Collections/vendors

ACM

AMS

Ebsco

IEEE Computer Society

Digital Library

SIAM

SpringerLink e-books

Turpion

Wiley

Etc.

When: looking for a specific
book/book collection

Step 2: Information Resources

- Use the [Catalogue](#) as starting point
- Always 'Sign In' with ULCN account
- Books: 'Leiden Collections'
- Find Databases (Web of Science, Google Scholar, etc.)
- Find e-Journals
- Do the [Catalogue Tutorial](#) to get started

The screenshot shows the 'Search tools' page of the Universiteit Leiden library. At the top, there is a navigation bar with links for 'University', 'Current students', 'Alumni', and 'Staff members'. Below this is a search bar with a dropdown menu set to 'All' and a search icon. To the right, there are buttons for 'Nederlands' and 'English'. The main content area features a large image of a magnifying glass over a keyboard. Below the image, there is a 'Search the Library' section with a search input field containing 'Books, articles, databases' and a 'My Library account' button. A 'Search tools' section follows, containing a list of search options: 'The Catalogue', 'Databases', 'Digital Special Collections', 'Leiden Repository', 'Google Scholar', 'Web of Science', and 'WorldCat & Picarta'. To the right of this list, there is a text block explaining that the library is a portal to scientific information and lists available tools like catalogues, bibliographies, and databases. Below this text, there are logos for 'articles', 'WEB OF SCIENCE™', and 'WorldCat'.

The screenshot shows the footer and search bar of the Universiteit Leiden library website. The footer is a dark blue banner with the Universiteit Leiden logo on the left and the text 'New Search | Find Databases | Find e-Journals | Acquisitions | Library Home | Ask a Librarian | Help' in the center. On the right side of the footer, there are links for 'Guest', 'e-Shelf', 'My Account', and 'Sign in', with the 'Sign in' link circled in red. Below the footer is a search bar with tabs for 'All Content', 'Leiden Collections', and 'Special Collections'. The search bar contains a search input field, a 'Search' button, and a link to 'Advanced Search'.

Step 2: Catalogue

<http://catalogue.leidenuniv.nl>

Step 2: Information Resources - Books

- Snellius: always use the lending form
- Fill in:
 - Student number
 - Barcode
 - Spine/body number (MSC + book number)
 - Etc.



Leiden University Mathematics and Natural Sciences Libraries

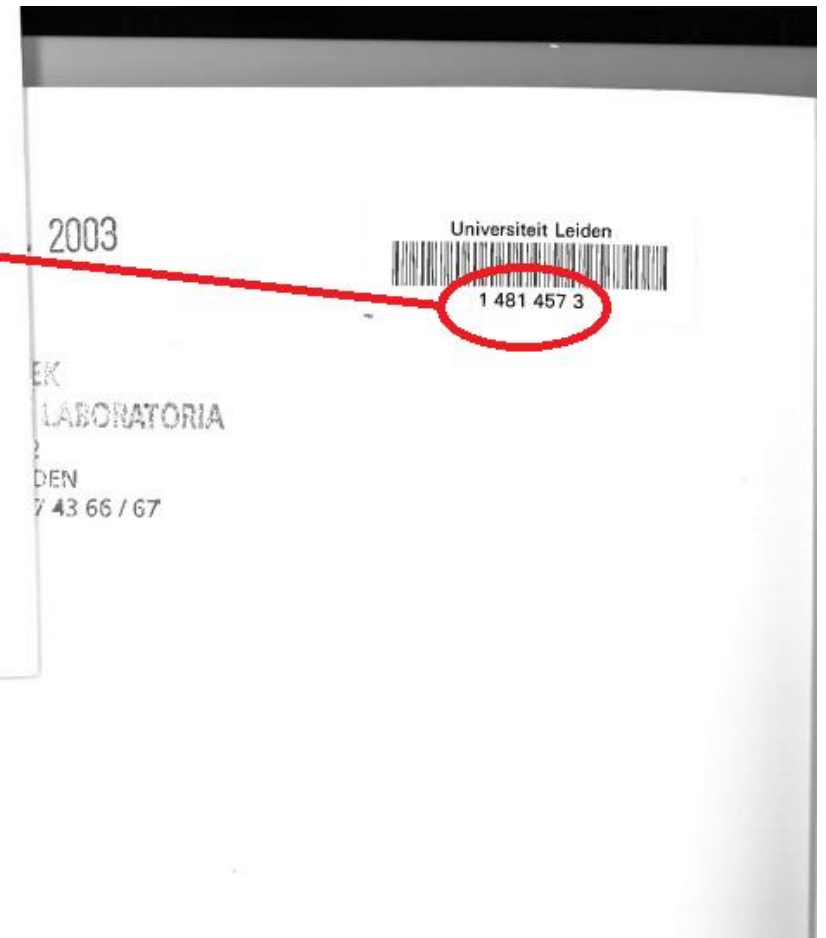
Barcode (inside front cover):	Lent to:
Subject heading & booknr. (spine of the book):	Page nr. LU-card, Choose s / m / g
Author:	8 figures: No library pass or student card? Please fill in ↓ (Working)address & phone number:
Title:
Volume/year:.....

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Signature:

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Peculiarities of Mathematical Databases

	MathSciNet	Web of Science
Review	Usually a comment or short abstract of the publication	Overview of current research on a specific research subject. In mathematics look for books to get more similar content.
Classification	Mathematical Subject Classification	Broad subject areas such as statistics or applied mathematics
Impact	MCQ – based upon citations from mathematical journals only	Impact Factor – based upon all citations. For example also from applied fields such as chemistry.
Material	Many books, check catalogue as well as GetIt@Leiden	Mostly points to papers
Language	English, French, German, etc.	Abstract and title usually translated to English!

Mathematical Databases - MSC

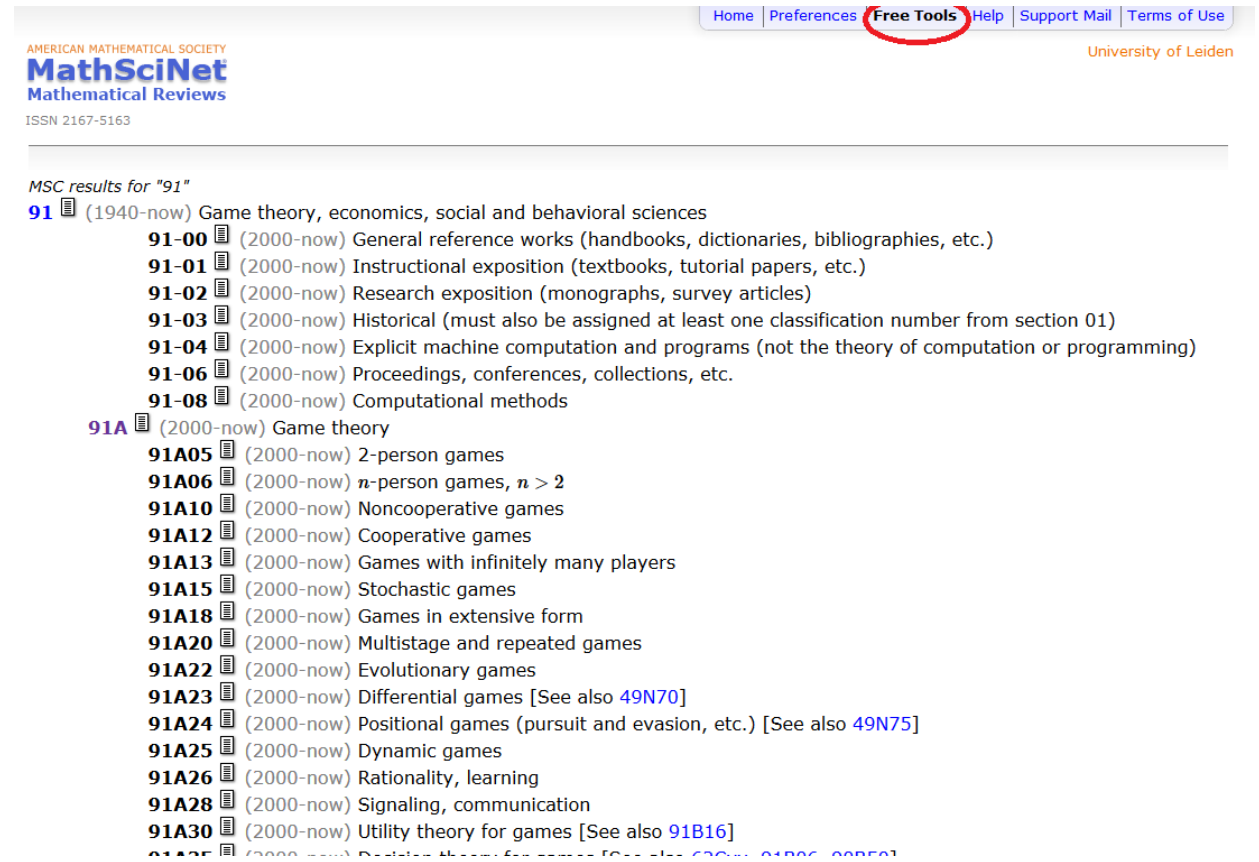
MSC: Mathematics Subject Classification

Classification in MathSciNet, Zentralblatt MATH, Arxiv and Snellius library!

- MathSciNet: Free Tools
- <http://www.ams.org/msc>

Tips:

- Use hierarchy
- Check the date!



The screenshot shows the MathSciNet website interface. At the top, there is a navigation bar with links for Home, Preferences, Free Tools (highlighted with a red circle), Help, Support Mail, and Terms of Use. The MathSciNet logo and "Mathematical Reviews" text are visible, along with the ISSN 2167-5163. The main content area displays "MSC results for '91'" and lists the following classification categories:

- 91** (1940-now) Game theory, economics, social and behavioral sciences
 - 91-00** (2000-now) General reference works (handbooks, dictionaries, bibliographies, etc.)
 - 91-01** (2000-now) Instructional exposition (textbooks, tutorial papers, etc.)
 - 91-02** (2000-now) Research exposition (monographs, survey articles)
 - 91-03** (2000-now) Historical (must also be assigned at least one classification number from section 01)
 - 91-04** (2000-now) Explicit machine computation and programs (not the theory of computation or programming)
 - 91-06** (2000-now) Proceedings, conferences, collections, etc.
 - 91-08** (2000-now) Computational methods
- 91A** (2000-now) Game theory
 - 91A05** (2000-now) 2-person games
 - 91A06** (2000-now) n -person games, $n > 2$
 - 91A10** (2000-now) Noncooperative games
 - 91A12** (2000-now) Cooperative games
 - 91A13** (2000-now) Games with infinitely many players
 - 91A15** (2000-now) Stochastic games
 - 91A18** (2000-now) Games in extensive form
 - 91A20** (2000-now) Multistage and repeated games
 - 91A22** (2000-now) Evolutionary games
 - 91A23** (2000-now) Differential games [See also 49N70]
 - 91A24** (2000-now) Positional games (pursuit and evasion, etc.) [See also 49N75]
 - 91A25** (2000-now) Dynamic games
 - 91A26** (2000-now) Rationality, learning
 - 91A28** (2000-now) Signaling, communication
 - 91A30** (2000-now) Utility theory for games [See also 91B16]
 - 91A35** (2000-now) Decision theory for games [See also 62C01, 91B06, 91B50]

Not Found => Check Catalogue

University of Leiden library search results for "Origamics mathematical explorations through paper folding". The search results show 1-10 of 2,625 items. The top result is a book by Haga, Kazuo, 1934-, Fonacier, Josefina., Isoda, Masami. The search interface includes options for "Personalize your results", "Expand My Results", and "Refine My Results". A red arrow points to the "Full text available at: EBSCOhost Academic Collection - World Wide" link.

MathSciNet search results for "Origamics". The entry is for "Origamics" by Haga, Kazuo (J-TSUKS), edited and translated by Josefina C. Fonacier and Masami Isoda. The entry includes a "Citations" box showing 1 reference and 0 reviews. A red arrow points from the "Book" link in the navigation bar to the book cover in the World Scientific screenshot below.

Kazuo Haga, a retired professor of biology from the University of Tsukuba, Japan, might seem an unlikely person to become an internationally-known advocate for discovery-based geometry education via origami (paper folding). Yet for several decades Haga has been preaching the virtues of paper folding as a mathematical laboratory from which the process of experimentation, conjecture, and proof can be taught to students of all levels. *Origamics* is the first book-length translation of his work to appear in English. (The only other effort is his article [in *Origami³ (Asilomar, CA, 2001)*, 307–328, A K Peters, Natick, MA, 2002; see [MR1955754](#)].)

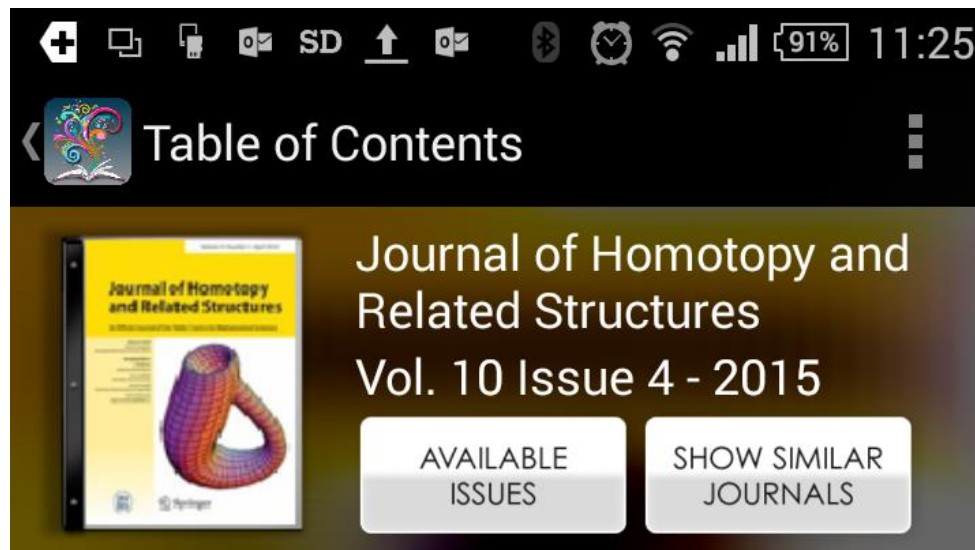
Haga's approach is to focus on intrinsic properties they could be discovered by middle- or high-school students (instead of producing animals) are what Haga refer

World Scientific website showing the book "Origamics: Mathematical Explorations Through Paper Folding". The page displays the book cover, ISBN, and pricing information. A red circle highlights the "Buy Now" button for the hardcover edition. The page also features a "New titles in 2018 across 15 subject catalogues" banner.

zbMATH search results for "Origamics mathematical explorations through paper folding". The search results show the book's MSC classification (51M15, 51M04, 51-01, 00A08, 97A20) and keywords (Pythagorean triangle). A red arrow points from the "Full text available at" link in the library search results to the "Get it @ Leiden" link.

Step 2: Information Resources - Journals

Keep up with the latest trends on your topic by following specific journals.
Download Browzine on iOS or Android, login with your ULCN-account.

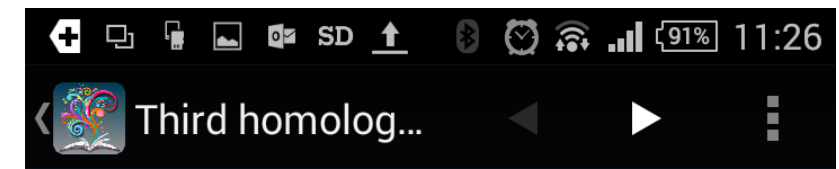


Third homology of
 SL_2 and the indecomposable
 K_3

pp. 673



Mirzaii, Behrooz



J. Homotopy Relat. Struct. (2015) 10:673–683
 DOI 10.1007/s40062-014-0080-9



Third homology of SL_2 and the indecomposable K_3

Behrooz Mirzaii

Received: 18 February 2014 / Accepted: 8 April 2014 / Published online: 25 April 2014
 © Tbilisi Centre for Mathematical Sciences 2014

Abstract It is known that, for an infinite field F , the indecomposable part of $K_3(F)$ and the third homology of $\mathrm{SL}_2(F)$ are closely related. In fact, there is a canonical map $\alpha : H_3(\mathrm{SL}_2(F), \mathbb{Z})_{F^*} \rightarrow K_3(F)^{\mathrm{ind}}$. Suslin has raised the question: Is α an isomorphism? Recently Hutchinson and Tao have shown that this map is surjective. In this article, we show that α is bijective if and only if the natural maps $H_3(\mathrm{GL}_2(F), \mathbb{Z}) \rightarrow H_3(\mathrm{GL}_3(F), \mathbb{Z})$ and $H_3(\mathrm{SL}_2(F), \mathbb{Z})_{F^*} \rightarrow H_3(\mathrm{GL}_2(F), \mathbb{Z})$ are injective.

1 Introduction

For an infinite field F , Suslin has proved that the Hurewicz homomorphism

$$h_3 : K_3(F) = \pi_3(\mathrm{BSL}(F)^+) \longrightarrow H_3(\mathrm{BSL}(F)^+, \mathbb{Z}) \simeq H_3(\mathrm{SL}(F), \mathbb{Z})$$

is surjective with 2-torsion kernel. In fact, he has shown that h_3 sits in the exact sequence

$$K_2(F) \xrightarrow{I(-1)} K_3(F) \longrightarrow H_3(\mathrm{SL}(F), \mathbb{Z}) \longrightarrow 0,$$

where the homomorphism $I(-1) : K_2(F) \rightarrow K_3(F)$ coincides with multiplication by $I(-1) \in K_1(\mathbb{Z})$ [10, Lemma 5.2, Corollary 5.2]. Let

Communicated by Hvedri Inassaridze.

B. Mirzaii (✉)

Step 3: Search Strategy

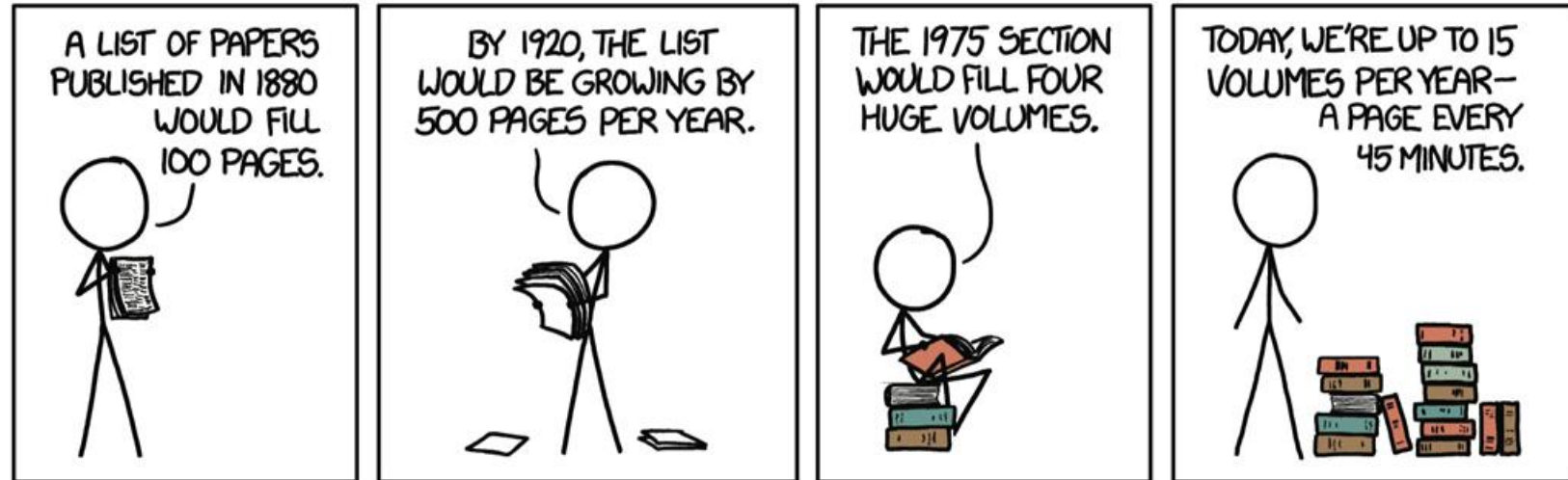
Original Research is:

1. Go where no one has gone before
2. Builds upon existing scientific foundations

ReSearch

Information overload

1. Strategy: define what you are looking for
2. Search efficiently and effectively



Step 3: Search Strategy – Snowball/Citations

Starting point:

- Excellent article
- Book

Search engines:

- Google Scholar
- Web of Science
- MathSciNet
- Zentralblatt MATH



Science and Society Museum/ Universal Images Group

Step 3: Search Strategy – MathSciNet

- Citation Database
- American Mathematical Society
- 3 million+ references
- Reviews
- Search within references
- Filter on
 - MSC
 - Publication type
 - Author

The screenshot shows the MathSciNet interface. At the top right, there are navigation links: Home, Preferences, Free Tools, Help, Support Mail, and Terms of Use. The American Mathematical Society logo is on the left, with 'MathSciNet 75' and '1940-2015' anniversary text. The ISSN is 2167-5163. The University of Leiden logo is on the right. Below the navigation is a 'Previous Up Next' link. A dropdown menu for 'Select alternative format' is visible. The search results are for 'Citations of 2349551'. The entry is MR3161382, reviewed, by Holst, Lars (S-RIT). The title is 'Probabilistic proofs of Euler identities. (English summary)'. The journal is 'J. Appl. Probab. 50 (2013), no. 4, 1206-1212'. There are links for PDF, Clipboard, Journal, Article, and Make Link. A box on the right shows 'Citations: From References: 1, From Reviews: 0'. Below the entry is a paragraph of text: 'In this paper, the author gives an alternative proof for Euler's exact sum for the Basel problem. Also the author proves Euler's infinite product formula for the sine using the hyperbolic secant distribution.' Below that, it says 'Reviewed by İnci Ege'. A 'References' section follows with a list of 8 references.

AMERICAN MATHEMATICAL SOCIETY
MathSciNet 75
Mathematical Reviews 1940-2015
ISSN 2167-5163

Home | Preferences | Free Tools | Help | Support Mail | Terms of Use

University of Leiden

Previous Up Next

Select alternative format

Publications results for "Citations of 2349551"

MR3161382 Reviewed
Holst, Lars(S-RIT)
Probabilistic proofs of Euler identities. (English summary)
J. Appl. Probab. 50 (2013), no. 4, 1206-1212.
11M06 (01A50 33B10 60E05)
PDF | Clipboard | Journal | Article | Make Link

Citations
From References: 1
From Reviews: 0

In this paper, the author gives an alternative proof for Euler's exact sum for the Basel problem. Also the author proves Euler's infinite product formula for the sine using the hyperbolic secant distribution.

Reviewed by İnci Ege

References

1. BATEN, W. D. (1934). The probability law for the sum of n independent variables, each subject to the law $(1/(2h))\operatorname{sech}(\pi x/(2h))$. *Bull. Amer. Math. Soc.* **40**, 284-290. [MR1562838](#)
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7. GORDON, L. (1994). A stochastic approach to the gamma function. *Amer. Math. Monthly* **101**, 858-865. [MR1300491](#)
8. HARKNESS, W. L. AND HARKNESS, M. L. (1968). Generalized hyperbolic secant distributions. *J. Amer. Statist. Assoc.* **63**, 329-337.

MathSciNet

Google Scholar - citations

Step 3: Search Strategy – Formulating

- Be specific
- Ask questions:
 - What? – Nash Equilibria
 - Who? –
 - Why? – Want to discover how to make people spend in my supermarket
 - How? – By changing the pricing
 - When? – Not relevant
 - Where? – in the supermarket
- Formulate as topic or question

Example:

How can I maximize my supermarket profits using Nash equilibria?



OR



Step 3: Search Strategy – Search Tools

- First split up your question in concepts
- Use many synonyms (from broad searches, www.thesaurus.com, etc.)
- Use different languages! (tip: Wikipedia in different languages, database Van Dale)

How can I maximize my **supermarket profits using **Nash equilibria**?**

Concept	Synonym 1	Synonym 2
Nash equilibria	Équilibre de Nash	
Profit		
Supermarket		

Step 3: Search Strategy – Search Tools

Use wildcards. They are database specific. For Web of Science:

\$ = zero or one (colo\$r => colour, color)

? = one (m?n => man, men)

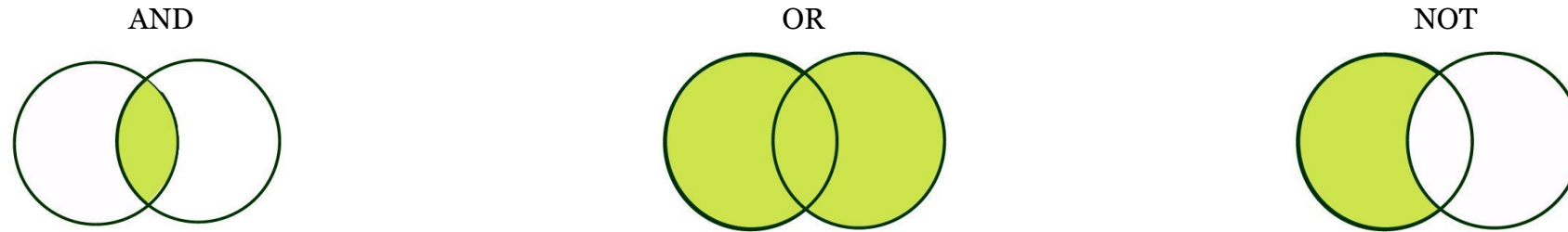
* = zero or more (carbon* => carbon, carbonate)

MathSciNet and Zentralblatt MATH just have * for all differences!

“Nash equilibri*” => “Nash equilibria” / “Nash equilibrium”

Step 3: Search Strategy – Search Tools

Couple your synonyms and concepts with booleans:



Concept	Synonym 1
Nash equilibria	OR
Profit	Discount
Supermarket	Retail

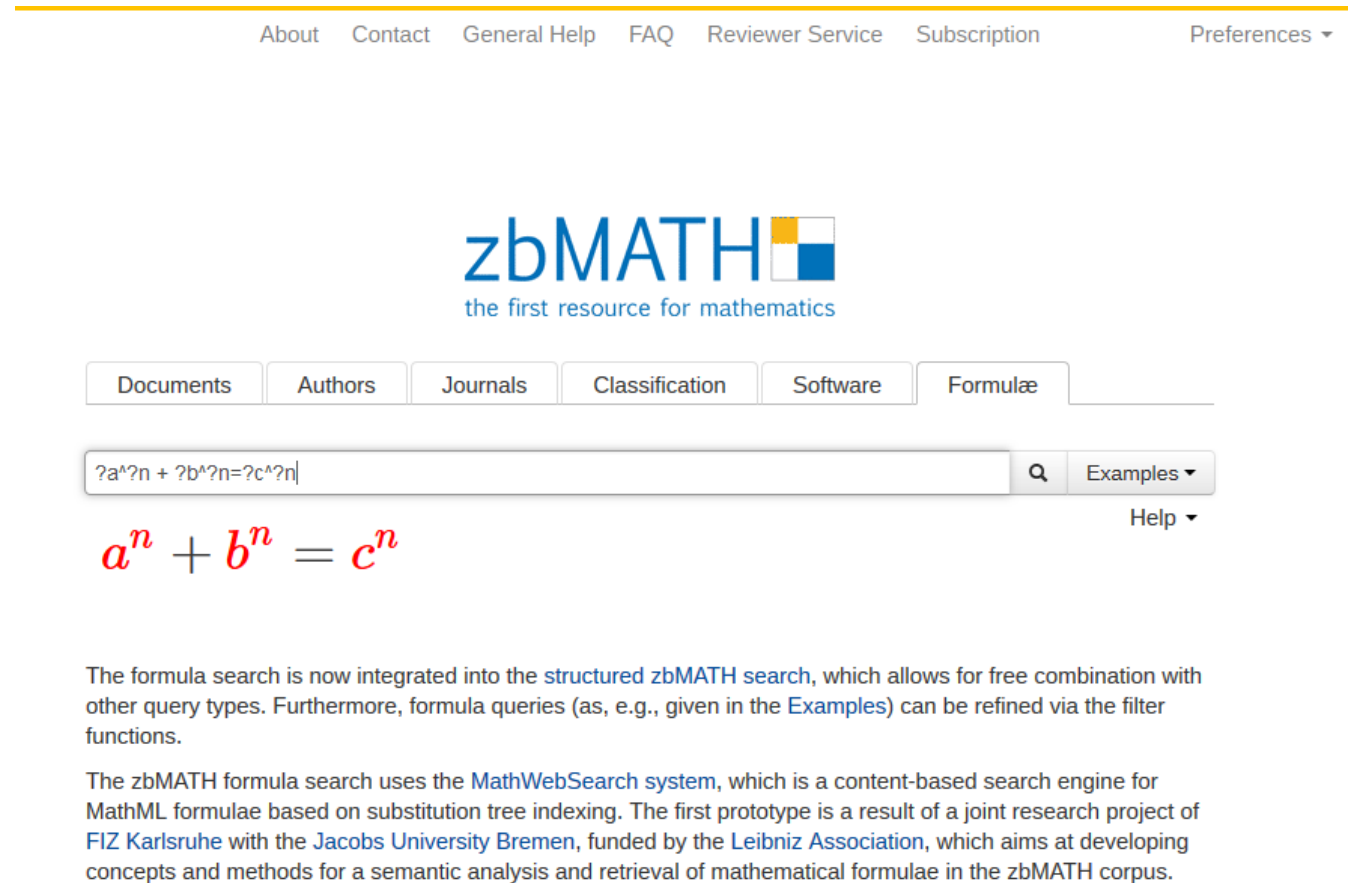
AND / NOT

“Nash equilibri*” AND (profit OR discount) AND (supermarket OR retail)

“Nash equilibri*” & (profit | discount) & (supermarket | retail)

Step 3: Search – Zentralblatt MATH

- Citation Database
- 3 million+ references
- Reviews (from Zentralblatt)
- European – oldest database
- Filter on
 - MSC
 - Publication type
 - Author
 - Formula!



The screenshot displays the zbMATH website interface. At the top, there is a navigation bar with links for About, Contact, General Help, FAQ, Reviewer Service, Subscription, and Preferences. The zbMATH logo is prominently displayed, with the tagline "the first resource for mathematics". Below the logo, there are several tabs: Documents, Authors, Journals, Classification, Software, and Formulæ. A search bar contains the query "?a^n + ?b^n = ?c^n" and a search button. To the right of the search bar are links for Examples and Help. Below the search bar, the search result for the formula $a^n + b^n = c^n$ is shown. A text block below the search bar explains that the formula search is now integrated into the structured zbMATH search, which allows for free combination with other query types. It also mentions that formula queries can be refined via the filter functions. A second text block explains that the zbMATH formula search uses the MathWebSearch system, which is a content-based search engine for MathML formulae based on substitution tree indexing. It notes that the first prototype is a result of a joint research project of FIZ Karlsruhe with the Jacobs University Bremen, funded by the Leibniz Association, which aims at developing concepts and methods for a semantic analysis and retrieval of mathematical formulae in the zbMATH corpus.

Researchgate.net: Social for Scientists

- Follow a scientist's output
- Read publications
- Ask questions
- Get research job suggestions

The screenshot shows the ResearchGate profile of Marcel De Jeu. At the top, there is a navigation bar with the ResearchGate logo (R^G) and links for HOME, PROJECTS, QUESTIONS, and JOBS. A search bar and a 'Follow' button are also visible. The profile header includes a placeholder for a profile picture, the name 'Marcel De Jeu' with a '19.53' score, and his title 'PhD Associate Professor' at 'Leiden University, Leiden · Mathematical Institute'. Below the header are tabs for Overview, Contributions, Timeline, Info, Stats, Scores, and Network. The main content area features a light green box asking if the user is interested in Marcel De Jeu's work, with 'Yes' and 'No' buttons. To the right, there is a section for 'Leiden University Mathematical Institute' and a 'Skills and expertise' section listing Functional Analysis (8), Analysis (6), Algebra (6), Mathematical Analysis (6), Topology (5), and Real Analysis (5). At the bottom, there are statistics for 40 research items, 941 reads, and 560 citations, along with a breakdown of 39 articles and 1 data item. A 'Top co-authors' section lists Sergei Silvestrov and Christian Svensson.

R^G HOME PROJECTS QUESTIONS JOBS Search Add new

Marcel De Jeu 19.53
PhD
Associate Professor
Leiden University, Leiden · Mathematical Institute

Follow

Overview Contributions Timeline Info Stats Scores Network

Interested in what Marcel De Jeu is working on right now?

Request an overview of their current project and we'll let them know that you're interested.

Yes No

Leiden University
Mathematical Institute
Leiden, Netherlands

Skills and expertise (15) View all

8 Functional Analysis 6 Analysis 6 Algebra
6 Mathematical Analysis 5 Topology 5 Real Analysis

40 Research items 941 Reads 560 Citations View stats

39 Articles 1 Data View details

Top co-authors View all

Sergei Silvestrov 28.09 · (6)
Malardalen University Follow

Christian Svensson 7.30 · (6) Follow

MathOverflow: Crowdsourced Answers

- Questions on mathematical topics
- Quality control: up and down voting
- Be nice: don't just ask, answer as well

Can't find the right reference for a theory, see the tag:

Reference-request

The screenshot shows the MathOverflow website interface. At the top, the logo "mathoverflow" is displayed in a stylized font. Navigation tabs include "Questions", "Tags", "Users", "Badges", "Unanswered", and "Ask Question". A main banner area contains the text: "MathOverflow is a question and answer site for professional mathematicians. It's 100% free, no registration required." Below this is a "Sign up" button. To the right, a section titled "Here's how it works:" features three icons: a question mark in a speech bubble, a speech bubble with an 'A', and a speech bubble with an 'A' and a checkmark. Text below these icons reads: "Anybody can ask a question", "Anybody can answer", and "The best answers are voted up and rise to the top".

Below the banner, there is a section "Explore Our Questions" with filters for "active", "10 featured", "hot", "week", and "month". A list of tags is shown: "ag.algebraic-geometry", "nt.number-theory", "reference-request", "co.combinatorics", "at.algebraic-topology", "gr.group-theory", "dg.differential-geometry", "pr.probability", "fa.functional-analysis", "rt.representation-theory", and "more tags".

Two question entries are visible:

- Question 1: "Elliptic regularity Schauder estimates with Dirichlet/Neumann boundary conditions". It has 1 vote, 1 answer, and 229 views. Tags include "reference-request", "ap.analysis-of-pdes", "elliptic-pde", and "regularity". It was modified 4 hours ago by the Community.
- Question 2: "For what nonnegative measures μ does $\mu * e^{-|\cdot|} \in L^{\infty}$?" It has 2 votes, 1 answer, and 863 views. Tags include "reference-request", "pr.probability", "fa.functional-analysis", "real-analysis", and "measure-theory". It was modified 5 hours ago by the Community.

On the right side, there is a "103 People Chatting" section with two chat snippets: "Homotopy Theory" (1 hour ago - lentic catachresis) and "MathOverflow" (2 days ago - Martin Sleziak). Below that is a "Recent Tags" section listing: "ag.algebraic-geometry" (88), "reference-request" (75), "nt.number-theory" (70), "dg.differential-geometry" (55), and "co.combinatorics" (41).

Step 4: Evaluating information

Read the abstracts and titles of the first pages

- Relevance to research question
- Age of the article
- Does it meet our quality criteria (peer review, references, etc)

Not relevant, too few or too many?

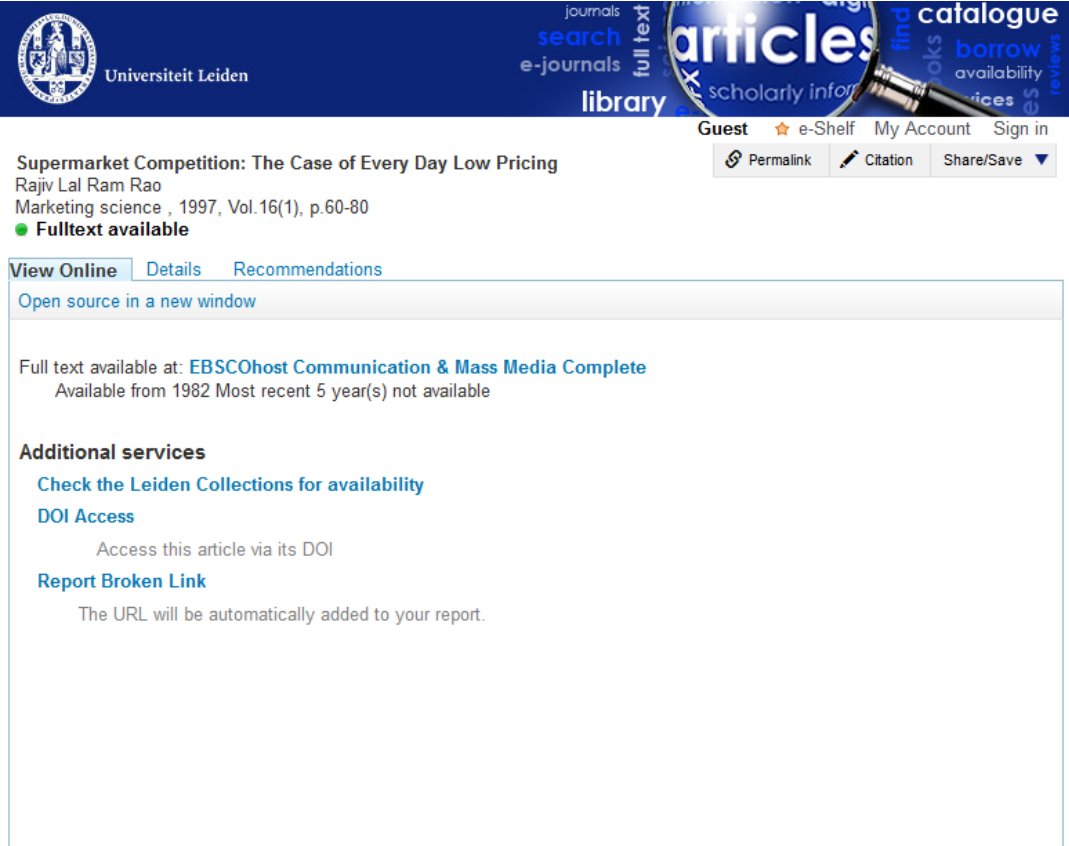
Adjust your search!

Step 5: Using Information - fulltext

- Download the articles via GetIt@Leiden / Full text
- Lookup the book in the [Library](#)

UBL has no access?

- Book: search on title in Catalogue
- Is a printed version available?
- Search for the article on [Google Scholar](#)
- Request from author
- Request a book or article we don't have: [Inter Library Loan](#)

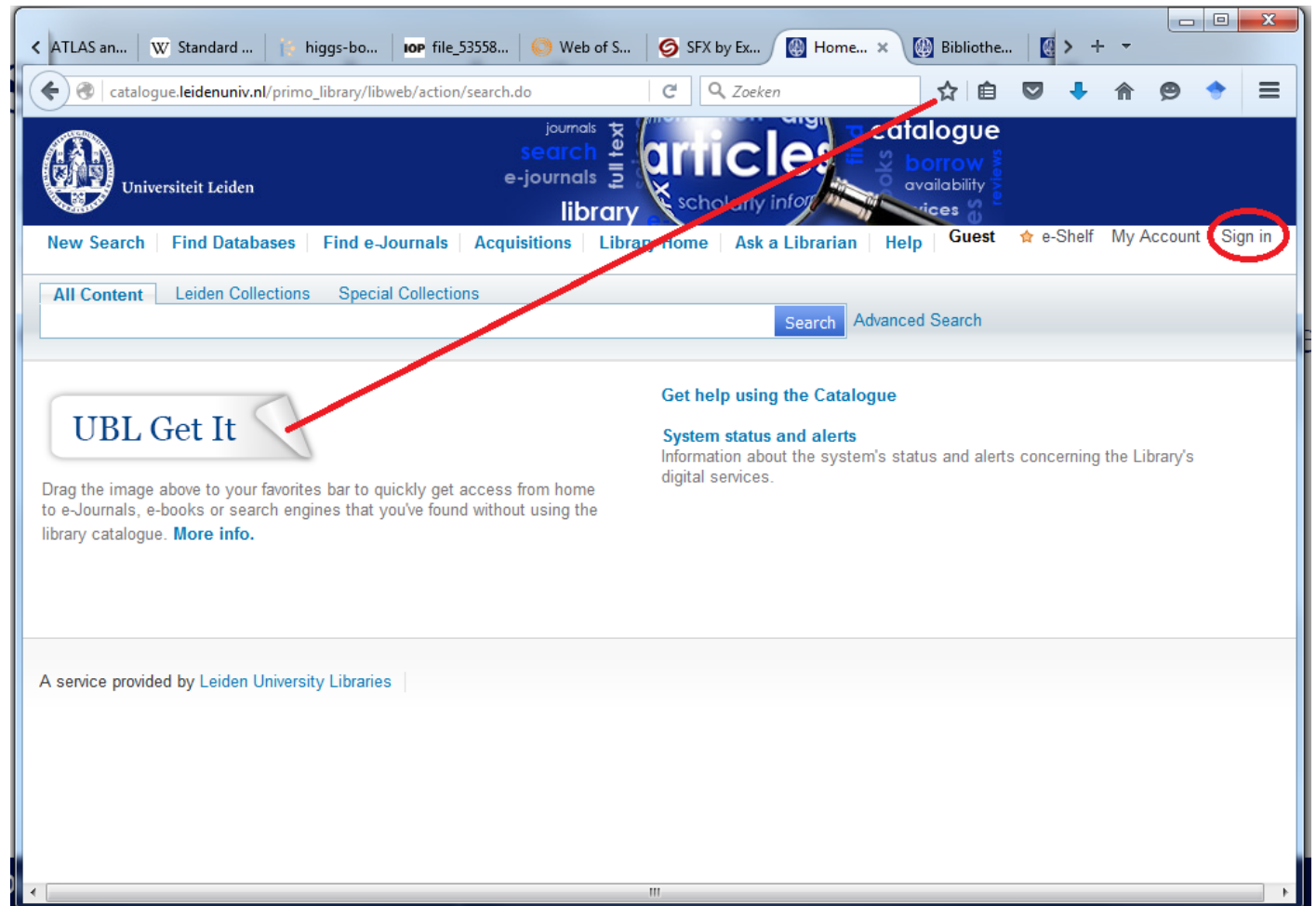


The screenshot shows the Universiteit Leiden library website. The header includes the university logo and navigation links for journals, search, e-journals, full text, articles, catalogue, borrow, availability, and reviews. The main content area displays the title "Supermarket Competition: The Case of Every Day Low Pricing" by Rajiv Lal Ram Rao, published in "Marketing science" in 1997, Vol. 16(1), p.60-80. A green dot indicates "Fulltext available". Below the title, there are tabs for "View Online", "Details", and "Recommendations". A link "Open source in a new window" is provided. The full text availability is noted as "Full text available at: EBSCOhost Communication & Mass Media Complete" with a note that it is available from 1982 and most recent 5 years are not available. Under "Additional services", there are links for "Check the Leiden Collections for availability", "DOI Access" (with a note to access via DOI), and "Report Broken Link" (with a note that the URL will be added to a report).

[Back to results list](#)

Step 5: Using information – At home

- Proxy access: sign in to <http://catalogue.leidenuniv.nl>
- Bookmark UBL Get IT
- Google Scholar: Settings -> Library Links -> Universiteit Leiden



Step 5: Using Information

When citing:

- Between quotes for literal citation
- Paraphrase – in your own words
- Always attribute
- Websites are no exception
- Turnitin software checks for plagiarism

Why?



Do your research

- Papers can be retracted if you did not do a proper literature search and gave due credits!
- Google couldn't find it is no excuse!

www.retractionwatch.com

AMERICAN MATHEMATICAL SOCIETY
MathSciNet
Mathematical Reviews
[Previous](#) | [Up](#) | [Next](#)

Citations
From References: 0
From Reviews: 0

MR2969055 (Review) 20M10

Wu, Chong-Yih (RC-NPIC-GED)

On right congruences of semigroups having no proper essential right congruences. (English summary)

Semigroup Forum 85 (2012), no. 2, 369–380.

A (right) congruence ρ on a semigroup S is essential if the intersection of ρ with any non-identity (right) congruence is not the identity congruence. The main result of this paper is the characterization of the semigroups, with an identity and without proper essential right congruences, whose lattice of right congruences is a distributive lattice. This result was previously published in a posthumous paper by R. H. Oehmke [*Hadronic J.* 27 (2004), no. 4, 459–471; [MR2123090 \(2005m:20147\)](#)] that appeared in a journal that is difficult to find and quite unusual for papers on semigroups. *Alessandra Cherubini*

References

1. Clifford, A.H., Preston, G.B.: *The Algebraic Theory of Semigroups* vol. 1. Am. Math. Soc., Providence (1961) [MR0132791 \(24 #A2627\)](#)
2. Dean, R.A., Oehmke, R.H.: Idempotent semigroups with distributive right congru-

Step 5: Using information: How to Find

Aust, & Buscher. (2012). Vertical cooperative advertising and pricing decisions in a manufacturer–retailer supply chain: A game-theoretic approach. *European Journal of Operational Research*, 223(2), 473-482. doi: 10.1016/j.ejor.2012.06.042

Step 5: Using Information - Referencing

Reference Management:

- Keep track
- Annotate legibly
- Insert citations in correct format
- Share literature

Managers:

- EndNote, [Mendeley](#), [Zotero](#)

Do the [tutorial](#) on citing

The screenshot displays the EndNote X6 interface. On the left, the 'My Library' pane shows 'All References (55)', 'Imported References (49)', 'Unfiled (55)', and 'Trash (63)'. The main pane shows a list of references with columns for Author, Year, and Title. The selected reference is: Mena-Bravo, A.; Luque de Castro, M. D. (2014) 'Sweat: A sample with limited present applications and promising future in metabolomics'. The right pane shows a preview of the article from the 'Journal of Pharmaceutical and Biomedical Analysis', including the title, authors, abstract, and a table of contents.

Author	Year	Title
Al Bratty, Mohammed; Chintapalli, Venkateswara R.; Dow, Jul...	2012	Metabolomic profiling reveals that Drosophila ...
Anizan, Sebastien; Bichon, Emmanuelle; Duval, Thibault; Mon...	2012	Gas chromatography coupled to mass spectro...
Baoutina, Anna; Alexander, Ian E.; Rasko, John E. J.; Emslie, Ke...	2008	Developing strategies for detection of gene d...
Barroso, Osque; Handelsman, David J.; Strasburger, Christian;...	2012	Analytical challenges in the detection of pepti...
Boccard, Julien; Badoud, Flavia; Grata, Elia; Ouertani, Samia; H...	2012	Urine metabolomics by UHPLC-QTOF-MSE: ste...
Boccard, Julien; Badoud, Flavia; Jan, Nicolas; Nicoli, Raul; Sch...	2014	Untargeted profiling of urinary steroid metab...
Boyard-Kieken, Fanny; Dervilly-Pinel, Gaud; Garcia, Patrice; P...	2011	Comparison of different liquid chromatograph...
Bradford, Blair U.; O'Connell, Thomas M.; Han, Jun; Kosyk, Ok...	2008	Metabolomic profiling of a modified alcohol li...
Cosmi, Erich; Visentin, Silvia; Favretto, Donata; Tucci, Mariann...	2013	Selective intrauterine growth restriction in m...
Courant, Frederique; Antignac, Jean-Philippe; Dervilly-Pinel, ...	2014	Basics of mass spectrometry based metabolom...
Courant, Frederique; Royer, Anne-Lise; Chereau, Sylvain; Mor...	2012	Implementation of a semi-automated strategy...
Dervilly-Pinel, Gaud; Weigel, Stefan; Lommen, Arjen; Cherea...	2011	Assessment of two complementary liquid chro...
Du, Zhiyong; Shen, Anna; Huang, Yuli; Su, Liang; Lai, Wenyan; ...	2014	1H-NMR-based metabolic analysis of human se...
Dumas, Marc-Emmanuel; Canlet, Cecile; Vercouteren, Joseph;...	2005	Homeostatic signature of anabolic steroids in c...
Duntas, Leonidas H.; Popovic, Vera	2013	Hormones as doping in sports
Fischetto, Giuseppe; Bermon, Stephane	2013	From gene engineering to gene modulation an...
Gorynski, Krzysztof; Bojko, Barbara; Nowaczyk, Alicja; Bucins...	2013	Quantitative structure-retention relationships ...
Guillaume, Davy; Veuthey, Jean-Luc	2013	State-of-the art of (UH)PLC-MS-(MS) techniq...
Hall, L. Mark; Hall, Lowell H.; Kertesz, Tziporah M.; Hill, Denn...	2012	Development of Ecom50 and Retention Index ...
Kieken, Fanny; Pinel, Gaud; Antignac, Jean-Philippe; Monteau...	2009	Development of a metabolomic approach bas...
Kiss, Agneta; Bordes, Claire; Buisson, Corinne; Lasne, Francois...	2014	Data-handling strategies for metabolomic stu...
Kiss, Agneta; Lucio, Marianna; Fildier, Aurelie; Buisson, Corin...	2013	Doping control using high and ultra-high resol...
Mena-Bravo, A.; Luque de Castro, M. D.	2014	Sweat: A sample with limited present applicati...
Metzler-Zebeli, Barbara U.; Ertl, Reinhard; Klein, Dieter; Zebe...	2015	Explorative study of metabolic adaptations to ...
Mueller, Daniel C.; Degen, Christian; Scherer, Gerhard; Jahrel...	2014	Metabolomics using GC-TOF-MS followed by s...
Oberacher, Herbert; Whitley, Graeme; Berger, Bernd	2013	Evaluation of the sensitivity of the Wiley regist...
Papaloucas, Marios; Kyriazi, Kyriaki; Kouloulas, Vassilis	2015	Pheromones: A New Ergogenic Aid in Sport?
Peterson, Amelia C.; Hauschild, Jan-Peter; Quarmby, Scott T.; ...	2014	Development of a GC/Quadrupole-Orbitrap m...
Pitsiladis, Yannis P.; Durussel, Jerome; Rabin, Olivier	2014	An integrative 'omics' solution to the detectio...
Pottgiesser, Torben; Schumacher, Yorck Olaf	2013	Current strategies of blood doping detection
Raro, Montse; Ibanez, Maria; Gil, Ruben; Fabregat, Andreu; Tu...	2015	Untargeted Metabolomics in Doping Control: ...
Regal, Patricia; Anizan, Sebastien; Antignac, Jean-Philippe; L...	2011	Metabolomic approach based on liquid chroma...
Reichel, Christian	2011	OMICS-strategies and methods in the fight ag...
Rieu, Michel	2004	The fight against doping: today and tomorrow
Rijk, Jeroen C. W.; Lommen, Arjen; Essers, Martien L.; Groot, ...	2009	Metabolomics Approach to Anabolic Steroid U...
Saint, Angela	2012	Metabolomics. London's Olympic drug testing L...
Saugy, Martial; Robinson, Neil; Saudan, Christophe	2009	The fight against doping: back on track with b...
Schumacher, Yorck Olaf; Saugy, Martial; Pottgiesser, Torben; ...	2012	Detection of EPO doping and blood doping: th...
Shen, Qing; Li, Xin; Qiu, Yunping; Su, Mingming; Liu, Yumin; Li...	2008	Metabonomic and metallic profiling in the a...
Shi, Xianzhe; He, Zhihui; Dou, Abo; Zhang, Fengxia; Lian, Wenl...	2010	Effect of menthol cigarette on rats for metab...
Sottas, Pierre-Edouard; Verne, Alan	2012	Current implementation and future of the Ath...

Assignments

- Do the exercises provided on the hand-out.
- Hand in the evaluation form

Questions?

R.m.de.jong@library.leidenuniv.nl



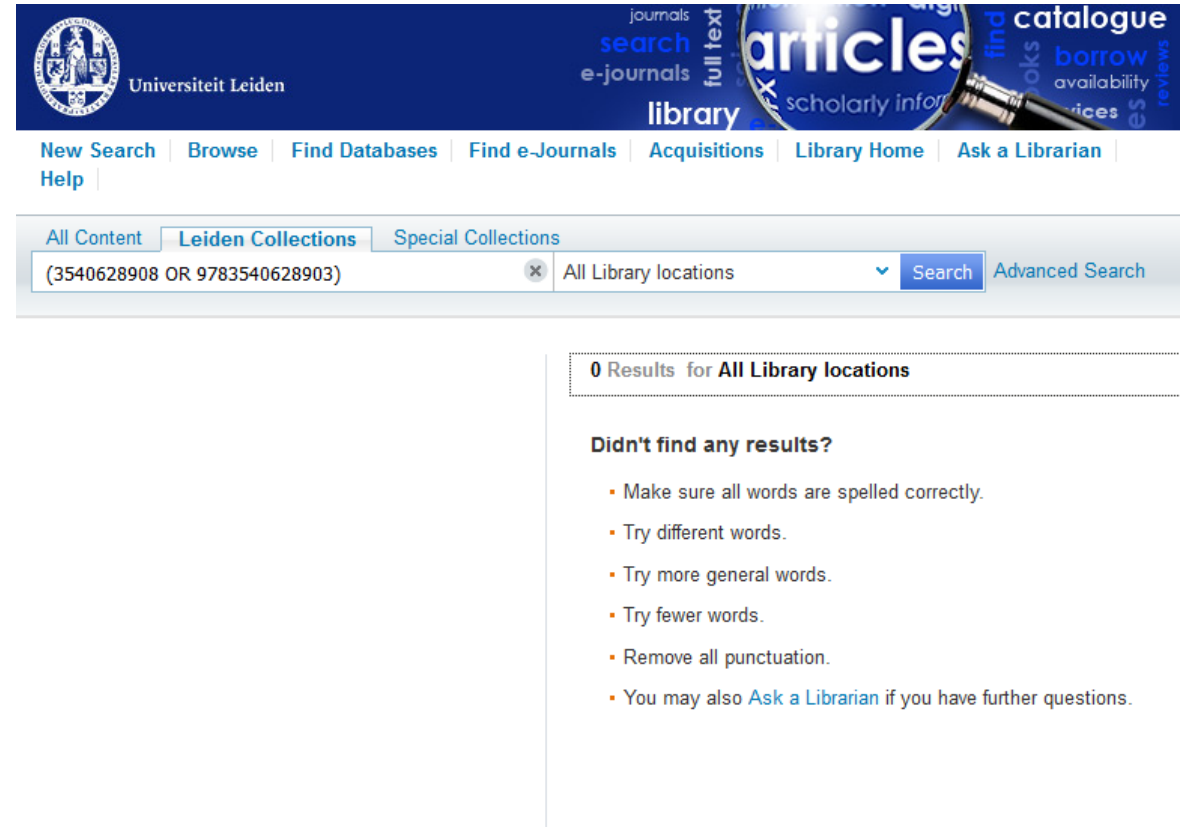
Universiteit
Leiden
The Netherlands

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Step 5: Using Information - Problems

GetIt@Leiden for books in MathSciNet and Zentralblatt MATH:

- Based on isbn
- Try searching on **title** and **author** in catalogue
- Check Google Scholar / Google Books
- Try searching specific vendor database:
 - ACM
 - SpringerLink
 - SIAM



The screenshot shows the library search interface for Universiteit Leiden. The header includes the university logo and navigation links for 'New Search', 'Browse', 'Find Databases', 'Find e-Journals', 'Acquisitions', 'Library Home', and 'Ask a Librarian'. Below the header, there are tabs for 'All Content', 'Leiden Collections', and 'Special Collections'. The search input field contains the query '(3540628908 OR 9783540628903)'. The search results section displays '0 Results for All Library locations' and a 'Didn't find any results?' message with the following suggestions:

- Make sure all words are spelled correctly.
- Try different words.
- Try more general words.
- Try fewer words.
- Remove all punctuation.
- You may also [Ask a Librarian](#) if you have further questions.

2014 Citations to Compos. Math.

in the MR Citation Database

Citing Year

Mathematical Citation Quotient for 2014			
Year	2014 Citations to Journal	Items Published in Journal	MCQ*
2013	92	84 (80% cited)	
2012	89	69 (90% cited)	
2011	106	72 (94% cited)	
2010	69	54 (93% cited)	
2009	80	54 (98% cited)	
	436 citations	333 items	1.31

* The 2014 All Journal MCQ is 0.41