

# Track Down Top Lit with MathSciNet

Dianna Morganti, MLS, PMP

Research, Instruction, and Outreach Librarian: Computer Science, Mathematics, and CIS and Quantitative Methods

## Abstract

MathSciNet is a valuable tool to save time for the Math Graduate Student. MathSciNet is both an index of Mathematics literature as well as a collection of reviews of the literature. Use MathSciNet to save yourself time in searching for research, finding supplemental learning resources, and learning new topics.

### Efficiency

MathSciNet saves the researcher time because almost every piece of literature is given an objective review as to its place in Mathematics. Many pieces will let you know when an article or book is not a significant contribution or provides inconclusive results. And great reviews are highlighted to call attention to groundbreaking works.

### Length of reviews

The founder of MathSciNet, Otto Neugebauer, asserted that a review of a poor work should be long and detailed enough so as to save the readers’ time from having to go read the poor work. By contrast, a review of a great piece should be so brief as to simply make someone want to immediately go read the article.

A real review:  
“This elementary problem occupies the whole of the lengthy paper under review. It is pursued with an unexpected maladroitness and many devious and useless complications.”  
G. R. Allcock on “les espaces complexes et les quaternions en theorie des leptons” by Tzou.  
MR0154641

## Diversity of Sources

Having multiple types sources to base your research on makes your arguments stronger.

### Books

Books from major Mathematical publishers are reviewed by MathSciNet reviewers as well. Books provide broad and comprehensive overviews on a topic about which much is known. Search for a well-reviewed book on your topic, or on the major subject (if your topic is specific) to learn the ins and outs before diving into the specifics.

### Journal Articles

Journal articles generally present the current research on a topic. Follow citations to see the direction that the research takes. And read reviews to make sure it is quality work.

### Case Studies

Case studies, which are also published in journals, present how something has been done to show you how you might do it. Think “Teaching the Taylor Expansion to Undergraduates”. Or “Proving MacLaren’s Theory Algebraically”. Reading the reviews of case studies in MathSciNet can help you determine if they’re worth your time.

## Elements of a MathSciNet Review

MR# is the record number of the review. You’ll also find it in the URL. It is the permanent identifier of this review.

**MR1695295 (2000e:13034)** Reviewed  
**Morey, Susan(1-STSU)**  
**Stability of associated primes and equality of ordinary and symbolic powers of ideals.**  
*Comm. Algebra* 27 (1999), no. 7, 3221–3231.  
13H10 (13A30)  
[Review PDF](#) | [Clipboard](#) | [Journal](#) | [Article](#) | [Make Link](#)

**Citations**  
From References: 5  
From Reviews: 0

Metadata is linked for discovery of related works.

Use this button to find the full text of an article when it's not available in MathSciNet

13H10 is the primary Math Subject Classification (MSC) Code of this article. (13A30 is secondary)  
13-Commutative Algebra  
13H – Local rings and semilocal rings  
13H10 Special types  
MSC is revised every 10 years to account for new areas of research

*I* be an ideal in a local Noetherian domain *R*. Twenty years ago, it was proved that as *n* grows large, the set Ass(*R/I<sup>n</sup>*) of prime divisors of *I* eventually stabilizes. The very difficult questions when and to what set remain largely untouched. This paper first treats the special case when *R* is a local Noetherian ring with infinite residue field and *I* is a strongly Cohen-Macaulay perfect ideal generated by a *d*-sequence. For this case, it identifies the stable value of Ass(*R/I<sup>n</sup>*) as comprising those primes *P* ⊇ *I* such that the minimal number of generators of *I<sub>P</sub>* equals height *P*, and also gives an upper bound on when stabilization occurs. The paper then goes on to identify two circumstances in which for all *n*, Ass(*R/I<sup>n</sup>*) consists of just the primes minimal over *I*.

Reviewed by **Stephen McAdam**

Review text summaries the work to help readers quickly judge whether or not the work is relevant to their needs or area of research.  
Many times the reviewers also make comments on quality or other criteria that may be helpful.


## Scholarship is a Conversation

**Catch up on the past conversation, and see where it’s heading:** Explore Citations from References and Reviews to discover how other scholars have used and discussed a piece of literature

**Citations**  
From References: 9  
From Reviews: 1

Sort by: **Newest** | Newest | Oldest | Journal  
Search w Citations

Publications results for "Anywhere=(monty hall problem)"  
MR3559457 Reviewed | [Horowitz, David](#)  
vii+322 pp. ISBN: 978-0-12-811111-1  
[Review PDF](#) | [Clipboard](#) | [Series](#)  
MR3575684 Reviewed | [Kurzyk, Dariusz\(PL-PASG-TC\)](#) | [Glos, Adam\(PL-PASG-TA\)](#)  
**Quantum inferring acausal structures and the Monty Hall problem.** (English summary)  
*Quantum Inf. Process.* 15 (2016), no. 12, 4927–4937.  
81P45  
[Review PDF](#) | [Clipboard](#) | [Journal](#) | [Article](#) | [Make Link](#)

**Keller, Thomas Michael**  
Email: [keller@txstate.edu](mailto:keller@txstate.edu)  
Website: <http://www.math.txstate.edu/people/faculty/keller.html>  
MR Author ID: 356408  
Earliest Indexed Publication: 1994  
Total Publications: 29  
Total Citations: 94  
Published as: Keller, Thomas Michael

**Publications**  
[Reviews](#)  
[Refine Search](#)  
[Co-Authors](#)  
[Collaboration Distance](#)  
[Citations](#)

**Co-authors (by number of collaborations)**  
Gruber, Alexander | Horvath, Erzsébet | Héthelyi, László  
Isaacs, I. Martin | Lewis, Mark L. | Harid, Attila  
Meierfrankenfeld, Ulrich | Moretó, Alexander  
Naughton, Keeley | Ragan, Dustin | Strasser, Benjamin  
Tims, Geoffrey T. | Yang, Yong<sup>3</sup>

**Publications (by number in area)**  
Group theory and generalizations  
Number theory

**Publications (by number of citations)**  
Group theory and generalizations  
Number theory

**Listen in on the important conversations:** Use author profiles to learn more about what your faculty advisors, mentors, or future colleagues are working on.

**Review all the different topics of conversation:** Click on any article’s MSC code (##X##) to view articles with the same primary Math Subject Classification Code.

## Nourish your curiosity: Research is Inquiry

### You’re a grad student: Welcome to research!

You should have learned by now that not all questions have been answered. And that many questions have multiple valid answers.

Look beyond your area of Mathematics for conversations and clues.

So, before you complete your research or literature review, go back and once more do some broad keyword searches. Ignore the MSC (which would pigeonhole you into one discipline), ignore citations and journal titles, and just see the breadth of the conversation. Look outside your discipline. Even though you may have done a broad search like this in the beginning to get background information, your new detailed knowledge in your topic area from all the in-depth research may help you draw new connections and new conclusions.

A real review:  
“It is hard to imagine in a single paper such an accumulation of garbled English, unfinished sentences, undefined notions and notations, and mathematical nonsense.” Dieudonné on “On decomposition of certain formal groups.” by Hsu MR0429922

## Just a little fun

You’ve heard of “Six Degrees of Kevin Bacon”, but do you know your professor’s Erdős Number? That’s how many degrees of separation someone is from the famously collaborative mathematician Paul Erdős.

MR Erdos Number = 3			
Yong Yang <sup>3</sup>	coauthored with	Guo Hua Qian	MR3348471
Guo Hua Qian	coauthored with	Marcel Herzog	MR2115018
Marcel Herzog	coauthored with	Paul Erdős <sup>1</sup>	MR0274413
<a href="#">Change First Author</a>   <a href="#">Change Second Author</a>   <a href="#">New Search</a>			

Dr. Yang’s Erdős number is 3.

You can also search for collaboration distance between any two mathematicians. What will your Erdős number be (co-author a paper and find out!)?

## Sources

Jackson, A. (1997). Chinese acrobatics, an old-time brewery, and the “Much needed gap”: The life of mathematical reviews. *Notices of the AMS*, 44(3), 330-337. Retrieved from <http://www.ams.org/notices/199703/comm-mr.pdf>  
American Mathematical Society. (2016). Librarians’ resources. Retrieved from <https://mathscinet.ams.org/mathscinet/help/librarians.html>