



## Case Study for Kanazawa University

We conducted an interview about MathSciNet, an essential database for mathematical research.

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### Tracking Research Developments Through Citations

Although this is a standard feature of many databases, I use the Citations function on a daily basis to track how subsequent research has built upon a given paper. While cited literature is listed in a paper, I believe it is like playing the lottery to find subsequent papers citing that paper, unless you use this kind of function. In fact, I used to regularly check the titles of the latest issues of a certain range of journals, but now I rarely do so unless I have plenty of time. Furthermore, regardless of the field, literature reviews are fundamental to research. MathSciNet is the most well-designed gateway for reviews in the field of mathematics and is indispensable to my current research activities.

### Comprehensive Reviews of Older Literature

In MathSciNet, some reviews themselves are quite distinctive and often help us to assess the value of a paper. I find that reviews of older literature, in particular, are often very thorough. I realize this is a rare example, but when I previously needed the following hard-to-find paper, I was both surprised and grateful to find that the MathSciNet review contained nearly the entire proof, allowing me to grasp the content in its entirety.

Blair, Charles E.

The Baire category theorem implies the principle of dependent choices.

Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys. 25 (1977), no. 10, 933–934.

To reiterate, while this is particularly noticeable in reviews of older literature, their content often serves as a valuable reference for advancing research.

## What to expect from MathSciNet in the future

I believe MathSciNet is the most comprehensive mathematical database in terms of review content, but I think it would be more convenient in today's world if it had integration with arXiv\*, as zbMATH does. I also hope that the Pairing function for remote access will become more stable.

That said, having lived through the era of searching through massive volumes of Mathematical Reviews and CD-ROMs, I am simply grateful and enjoy using the current online version of MathSciNet. It not only provides a fundamental database with reviews and various search functions but also features integration with Collaboration Distance\* and the Mathematics Genealogy Project\*, among other things. I hope these initiatives will continue in the future.

\*As of March 2026, MathSciNet does not support integration with arXiv, but the AMS is currently preparing to implement this in the future.

\*Pairing is a feature that allows access to MathSciNet from outside your institution. Details can be found at the link below.

[https://kw.maruzen.co.jp/ln/ec/ec\\_doc/ams\\_pairing\\_guide.pdf](https://kw.maruzen.co.jp/ln/ec/ec_doc/ams_pairing_guide.pdf)

\*Collaboration Distance: A function that allows you to calculate the numerical distance between two researchers (authors) based on their collaborative work (co-authorship). This is an extension of the Erdős number concept.

\*Mathematics Genealogy Project: Data designed to help understand the genealogy of the mathematical field.

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