

# Math Blogs

Should you blog about mathematics? Before I answer this, I should explain what “blogging” is, since there are probably three or four people who still don’t know.

A blog lets you write whatever you want and have it appear online. Your entries are displayed in reverse chronological order. People reading them can post comments, and you can reply to those comments. I could describe how to set up a blog, but that would make it seem harder than it is. Any idiot can do it, and many do. Websites like Wordpress and Blogger will lead you through the process step by step—and they’re free.

For a while math blogging was held back by the difficulty of including equations. Now Wordpress allows for  $\text{T}_\text{E}_\text{X}$ . So, we are now seeing a flowering of math blogs—and for some mathematicians, blogging has become an important part of their research activity.

My introduction to blogging came in 1993 when I started an online column called “This Week’s Finds in Mathematical Physics”. The idea was to write summaries of papers I’d read and explain interesting ideas. I soon discovered that, when I made mistakes, readers would kindly correct them—and when I admitted I didn’t understand things, experts would appear from nowhere and help me out. Other math bloggers report similar results.

In 2006 I joined forces with David Corfield and Urs Schreiber to start “The  $n$ -Category Café”, a group blog on math, physics, and philosophy. My column is now just a small part of lively discussion of topics ranging from elliptic cohomology, tensor categories, and type theory to “mathematics as a vocation”—and all these examples were taken from comments that appeared on one randomly chosen day!

By now there are over fifty math blogs in English. At least four are by Fields medalists; Timothy Gowers and Terry Tao have famously popular ones. Some math blogs are focused on specific topics: for example, “Low-Dimensional Topology” or “Motivic Stuff”. Some roam all over the map. Some start with great enthusiasm but sink into inactivity. To keep the conversation going, it helps to team up with a group of friends. A great example is the “Secret Blogging Seminar”, run by eight recent Berkeley math Ph.D.s.

Should you blog about mathematics? Judging from what I’ve seen, you should do it if you like explaining things, enjoy public discussions, and can deal calmly but firmly with arguments that get out of hand, or the occasional troublemaker. Some mathematicians are too worried about making a fool of themselves in public to enjoy blogging. Others are too afraid of offending people. And if my joke about “idiots” bothered you, blogging may be too hard-knuckled for you.

Even for those with the right personality, running a really good blog takes some skill. So, if you haven’t done so already, spend awhile reading blogs before trying to start

your own. The same problems keep coming up, and you’ll see better and worse ways to deal with them.

But there’s no need to start your own blog to enjoy some of the benefits. You can get a lot out of just reading them, and more if you join the conversations. Math blogs are also a great way for students and amateurs to get a sense of what research is like. Academic math bloggers spend a lot of time talking about topics that don’t appear in the published literature. Discussions once confined to the math department lounge are now conducted worldwide. While not without problems, this is a truly wonderful thing.

Here are a few examples of what math blogs can do, all taken from the “The  $n$ -Category Café”. Blog entries by Urs Schreiber (a postdoc in Germany) led to online discussions which blossomed into collaborative papers with Dave Roberts (a grad student in Australia) and James Stasheff (the American topologist)—neither of whom he had ever met, except online. A discussion on  $n$ -categories and stratified spaces evolved into Jonathan Woolf’s new paper “Transversal homotopy theory”. Perhaps most importantly, an online community has formed that has geometers, topologists, and category theorists regularly talking to physicists, computer scientists, and philosophers of mathematics.

The Internet has been around for a while, but we are far from figuring out everything we can do with it. Blogs are not the last word: wikis, where people can jointly write and edit texts, are also catching on. “The  $n$ -Category Café” now has an associated wiki, the “ $n$ -Lab”, which is a place for collaborative research and expository writing. Timothy Gowers and Terry Tao are using blogs and a wiki to run a series of “Polymath” projects, where large numbers of people cooperate to prove theorems. Recently, the website “Math Overflow” has become a universal clearinghouse for math questions. One can imagine many more experiments with the technology we have, and still more with the technology yet to come. Some will work, some will not. It’s an adventure.

For a list of math blogs, and further discussions on math blogging, see: <http://www.ncatlab.org/nlab/show/Online+Resources>.

—John C. Baez  
baez@math.ucr.edu