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Blogs add a new dimension to physics

Physicists are increasingly using Internet forums to exchange scientific views and share gossip.

Paula Gould explores the rise of "blogging"

In July 2004 security and safety fears led to the temporary closure of the Los Alamos National Laboratory (LANL), the original home of the atomic bomb. Months passed and parts of the lab remained shut. Some staff members opted to leave, while others grumbled to friends and family but essentially endured the situation. Concerned at the lack of public debate, Doug Roberts – a computer scientist at the lab – decided to start an online discussion forum to allow staff to air their views.

But Roberts' Web log (or "blog"), LANL: The Real Story (lanl-the-real-story.blogspot.com), has been more than just a place for people to moan. It has also been credited with contributing to the resignation, in May 2005, of Peter Nanos, the director of the Los Alamos lab. Indeed, the blog spawned numerous reports in the national and international press, and has so far been visited by about half a million people.

Running the blog is no easy feat for Roberts. At the height of its popularity, maintaining the site took about five or six hours a day. Even though he no longer works at Los Alamos, Roberts still spends two or three hours every day reviewing and posting contributions to the site. "This isn't for the weak of heart," he says. "If you create a forum where issues that are not complimentary to your place of work are discussed, you are not going to be very popular with the management."

Chatting in cyberspace

Creating a blog need not exact such a heavy toll, however. Blogs generally involve one or more regular contributors posting their thoughts about a chosen topic on a website. Anyone reading the blog can then upload their responses to these comments. For physicists, these forums provide a space for intellectual debate as well as social chitchat.

Quantum Diaries (interactions.org/quantumdiaries), for example, is a kind of public-relations exercise for particle physics. Set up as part of the 2005 International Year of Physics, the blog gives a flavour of what working for a large-scale collaboration is like. One contributor – or "blogger" –

Hands on
Blogging encourages active debate.

to Quantum Diaries is Nick Brook, who describes his life as an experimental particle physicist at the CERN laboratory in Geneva. His account may not have made front-page news, but it has led to Brook receiving several e-mails from would-be physicists wanting to enter the field.

Brook has deliberately avoided controversy with his postings, and shied away from commenting on political topics. "I have had to bite my tongue at times," he says. "If I came back from a particular meeting where something had wound me up, I deliberately didn't put it on the Web."

Sean Carroll, a physicist at the University of Chicago and an avid blogger, admits to exercising a degree of self-censorship in his postings too. As one of five contributors to Cosmic Variance (cosmicvariance.com), he is more than happy to share his views on politics, arts and current physics theories, but he has chosen not to comment on his search for a permanent faculty position.

Carroll's decision to start blogging came shortly after discovering – and enjoying – Web logs from other academics whose work he respected. "Then I realized that the software to do this was free, and if it didn't work, I could simply stop doing it. So why not?" says Carroll.

Cosmic Variance has a daily readership of about 2000 and growing. Keeping such a large audience interested is far easier with a collective of regular bloggers, he says. The blog's authority may also be raised if it is more than a sounding box for just one person.

Carroll believes that the informality and immediacy of blogs provide

a valuable means of communication, either between experts and non-experts, or among geographically disparate researchers. For instance, when a Cosmic Variance posting triggered interest in an experiment that had allegedly violated Einstein's theory of relativity, Carroll e-mailed the lead researcher and asked him to comment. The resulting guest blog quickly clarified the situation and prevented rumour from escalating into speculation.

Good for science

Blogging actually fulfils the utopian ideal of shared problem solving that can be absent from real-life scientific research, says Paul Cook, owner of PP Cook's Tangent Space (ppcook.blogspot.com). When Cook started a PhD in theoretical physics at King's College London, he was disappointed to find little opportunity for informal discussion about other students' projects, or wider fields of study. "In reality it turned out that everyone was focused on their area of expertise and not too interested in learning about others," he says.

Keeping a blog can also provide a sense of community for scientists working alone or with a small team in their particular institution, says Dave Bacon, originator of The Quantum Pontiff (dabacon.org/pontiff). In addition, a blog that is focused on an emerging research field may help attract more interest from the broader physics community, he says.

In The Quantum Pontiff, Bacon writes about his own field of quantum computing and other loosely related areas of physics. Although he describes his blog as nothing more than a "recreational endeavour", he now receives 400 to 500 visits each day. He acknowledges that blogging may be regarded as self-publicity, but says that writing a popular-science book or submitting a paper to a peer-reviewed journal could also fall into this category.

"It often becomes necessary, in a world where there is so much garbage floating around, to advertise your work," says Bacon. "Blogging, to me, is no worse than giving a talk at a conference."

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