

Looking for Stat(istician)s in All the Wrong Places

By Ann Cannon and Carolyn Cuff

Are you in a mathematics department that has been searching for an academic statistician but having a hard time finding one? Do you anticipate an opening for a statistician in 2006? You aren't alone. Anecdotal evidence suggests that many mathematics departments are having trouble hiring statisticians. The statistics community has taken notice of the situation and is attempting to help.

In the fall of 2004, fifteen statisticians, representing both liberal arts colleges and institutions with graduate departments of statistics, got together to discuss ways to improve the (two-directional) pipeline between these two types of institutions. Graduate institutions are concerned about declining numbers of domestic graduate students. Liberal arts colleges want to attract faculty members with degrees in statistics. This article is one of the results of this conversation.

With respect to the issue of mathematics departments wishing to recruit statisticians, one of the things we noted was that frequently mathematics departments advertise positions in places that are not the ones where academic statisticians tend to look. This article offers suggestions for where to advertise when recruiting academic statisticians. Within each category, we have ordered the listings starting with those mostly likely to be referenced by a graduate statistics student looking for an academic position.

Advertising in print (not free)

1. *AmStat News*, a monthly magazine published by the American Statistical Association and similar to FOCUS. The basic ad listing may not exceed 65 words, not counting equal opportunity information, and the cost for this basic ad is \$290 for nonprofit organizations. (Larger ads for greater fees are also available.) Ads must be received (electronically or in hard copy) by the first of the preceding month to ensure appearance in the next issue (for example, September 1 for the October issue). A paid *AmStat News* ad also appears for free during the same

month on the ASA job web site at <http://www.amstat.org/opportunities/>. The contact email address for more information is advertise@amstat.org.

2. *IMS Bulletin*, a bimonthly magazine published by the Institute of Mathematical Statistics. It reaches a much smaller audience than the *AmStat News*, but is still a search source for students in some of the graduate programs in statistics housed within mathematics departments. The deadline for the October issue is September 1 and there will be a similar deadline each year. The cost for a basic ad (up to 100 words) is \$100, but they also accept longer ads for a higher fee. For more information about this advertisement option, see <http://www.imstat.org/advertising.htm>. A position advertisement published in any issue of the *IMS Bulletin* is also posted at the web site without additional cost for the two month period corresponding to that issue.

3. *Newsletter of the Caucus for Women in Statistics*: Job notices must be submitted by December 30, 2005 for inclusion in the Winter 2005 *Newsletter*. The fee for publishing a job notice for a half-page ad or less is \$55, if prepaid, and \$80 if billed. Longer ads are \$75 prepaid and \$100 billed. Please send the job notice and a check payable to the Caucus for Women in Statistics to Margaret Minkwitz. For more information, visit <http://www.forestsoils.org/wcaucus/>.

4. Ranked below the above sources are two mathematics department mainstays: *Employment Information in the Mathematical Sciences* and *The Chronicle of Higher Education*. Of note to potential employers, none of the statisticians at the meeting realized that mathematics departments at liberal arts colleges regularly advertise in the *Chronicle*.

Direct Advertising

Hard copy notices can be sent to the chairs of statistics departments in the United States. The addresses are available

from the ASA web site <http://www.amstat.org>. Job notices sent directly to departments typically get posted in an area available to graduate students.

Electronic Advertising

Graduate students have become quite savvy about searching the web for job opening advertisements from schools which might be of interest. Put your best foot forward and make yourself appealing to a statistician.

1. The Department of Statistics at the University of Florida maintains a job listing web site <http://www.stat.ufl.edu/vlib/jobs.html> where any Statistics position can be posted free of charge. The job position description should be sent as a plain text attachment to the email address jobs@stat.ufl.edu with a request to post it to their job listing web site. Questions regarding the web page may be sent to the same email. Many statistics graduate students search this web site every year, looking for positions. Once the job is posted, the electronic advertisement stays on the site for 6 months or when a request is made to have it removed.

2. The American Statistical Association maintains an email alias for chairs of both statistics and mathematics departments that have Ph.D. programs in statistics. Job position advertisements can be emailed electronically to all such graduate programs through this email alias. You will not be able to send the email directly to this list as only people who belong to this group can do that. However, you can send a job position notice to the American Statistical Association's office with a request that the job position be sent out to the chairs via this email alias. For this purpose, you need to send your job position (either as an attachment or entirely contained within your email message) to Carole Sutton, at this email address: Carole@amstat.org, along with the request that she send this job notice out to the "stat academic representatives" list.

Many mathematics departments routinely plan to conduct interviews at the Joint Mathematics Meetings in January. Most statisticians are not particularly interested in (or even aware of) these meetings and hence their graduate students are typically unaware of them. If your position is primarily aimed at hiring a statistician, interviews conducted at these meetings will be frustrating at best.

Statisticians can be extremely happy in mathematics departments. The statistics community has strong support systems

for those individuals who serve as the sole statistician at a college (see <http://www.isostat.org>). The MAA also has a special interest group devoted to the teaching of statistics (see <http://www.pasles.com/sigmaastat>). Reaching statisticians who may eventually consider a mathematics department as their home is quite possible, but it's important to place the information where it is likely to be seen.

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NSF Beat Course, Curriculum, and Laboratory Improvement (CCLI) Program

By Sharon Cutler Ross

The CCLI program of the Division of Undergraduate Education has been substantially rewritten to reflect the maturation of the program, increased knowledge about the teaching and learning of science, technology, engineering, and mathematics (STEM) subjects, new challenges for STEM education, and changes in the NSF budget. Five components of a cyclic model of knowledge production and improvement of practices have been identified and form the basis for CCLI grant proposals. Briefly, these are research on undergraduate STEM teaching and learning; creation of materials and teaching strategies; faculty development; implementation of educational innovations; and assessment of learning and evaluation of innovations.

The revised CCLI program will accept three types of proposals. Phase 1 projects are exploratory in nature, likely to be focused on one curriculum component, and involve a limited number of students and faculty at one institution. Broader scope projects are possible if within budget limitations. An incentive of additional funding is offered to projects in which two- and four-year institutions

collaborate. Depending on suitable applications, between 55 and 70 Phase 1 awards are planned. Grants for one- to three-year projects can be up to \$150,000 (or \$200,000 for joint two- and four-year institution proposals).

Phase 2 expansion projects are expected to include at least two of the five components of the cyclic model and to spell out carefully the connections between each part. A Phase 2 project will build on smaller-scale innovations or implementations to refine and test these in several settings. This type of project should aim to develop products or processes to the point where they can be distributed widely or commercialized, if appropriate. Again, depending on the proposals submitted, DUE anticipates funding 15 to 25 Phase 2 awards, each with a total budget of up to \$500,000 for 2 to 4 years.

The third category of new CCLI projects is comprehensive projects that combine established results and mature products from several components of the cyclic model. Evaluation activities should be deep and broad based and demonstrate the project's impact on many students

and faculty at a wide range of institutions. Dissemination and outreach with national impact are a particularly important element of Phase 3 projects. Funding is available for one to four Phase 3 awards of up to \$2,000,000 for 3 to 5 years each.

Important features of successful proposals include: quality, relevance, and impact; student focus; use and contribution to STEM education knowledge; STEM community building; measurable expected outcomes; and a strong evaluation plan.

The former CCLI program was very successful in promoting the development, implementation, dissemination, and evaluation of innovative course and curricular materials and in assisting STEM educators to support these activities with appropriate technology. The kinds of projects supported in the earlier program can be part of these revised categories. The emphasis in the new CCLI program is on greater integration of efforts from all three types of projects to maximize the effectiveness of improving undergraduate STEM education.