President’s Column: In Praise of Postdocs

IMS President Terry Speed writes:
I don’t know what proportion of IMS members have PhDs (or an equivalent) in probability or statistics, but I’d guess it’s fairly high. I don’t know what proportion of those that do have PhDs would also have formal post-doctoral research experience, but here I’d guess it’s rather low.

Why? One possible reason is that for much of the last 40 years, anyone completing a PhD in prob or stat and wanting a research career, could go straight into one. Prospective employers of people with PhDs in our field—be they universities, research institutes, national labs or companies—don’t require their novices to have completed a postdoc, and most graduating PhDs are only too happy to go straight into their first job.

This is in sharp contrast with the biological and physical sciences, where it is rare to appoint someone to a tenure-track faculty or research scientist position without their having completed one or more postdocs.

The number of people doing postdocs in probability or statistics has been growing over the last 15 years. This is in part due to the arrival on the scene of institutes such as the MSRI, IMA, IPAM, NISS, NCAR, and recently the MBI and SAMSI [see article on next page] in the US, the Newton Institute in the UK, the Fields Institute in Canada, the Institut Henri Poincaré in France, and others elsewhere around the world. In such institutes short-term postdoc positions go with their current research programs, and there are usually a smaller number continuing for longer periods.

It is also the case that an increasing number of senior researchers are being awarded research funds to support postdocs in prob or stat, often in the newer, applied areas such as computational biology.

And finally, it is has long been the case that many countries (Germany, Sweden, Switzerland, and the US, to name a few) have national grants supporting postdoctoral research in their own or, even better, another country. I think all of this is great, and would like to see this trend continue and strengthen.

Why do I think postdocs are a good thing? And why do I think young probabilists and statisticians should do one, even when they can get a good job without having done so?

For most of us, doing a PhD means getting totally absorbed in some relatively narrow research area for 2–3 years, treating that as the most important part of science for that time, and trying to produce some of the best work in that area. This is fine, and we get a PhD for our efforts, but is it good training for a lifelong research career? While it is obviously good preparation for doing more of the same, I don’t think it is adequate for research in general. I regard the successful completion of a PhD as (at least) evidence that the person in question can do research, but it doesn’t follow that they can go on and successfully do research in new area, or in a different environment, or without close supervision.

Postdocs give you the chance to broaden, to learn new technical skills, to become acquainted with new areas, and to absorb the culture of a new institution, all at a time when your professional responsibilities are far fewer than they would have been had you taken that first “real” job. The postdoc period can be a wonderful time in your scientific life, one which sees you blossom, building on the confidence you gained by having completed your PhD, in what is still essentially a learning environment, but one where you can follow your own interests, explore new areas, and still make mistakes. At the worst, you have delayed your entry into the workforce two or three years, and you can still keep on working in your PhD area if you wish. The number of openings for researchers in prob or stat doesn’t fluctuate so much on this time scale, so you are unlikely to be worse off than the earnings foregone. At best, you will move into a completely new area of research, one much better suited to your personal interests and skills, perhaps also better suited to market demand, but either way, one chosen with your PhD experience behind you. This can greatly enhance your long-term career prospects and more than compensate for your delayed entry into the workforce.

Students: the time to think about this is now, not just as you are about to file your dissertation. And the choice is not necessarily one between immediate security and career development: you might be able to have both. You shouldn’t shy from applying for tenure-track jobs and postdocs at the same time, and if offered the job you want, requesting (say) two years’ leave of absence to do the postdoc you want. Employers who care about your career development are unlikely to react badly to such a request.

Posters
Many (most) conferences have official posters. As a long-time poster lover, I’m delighted to introduce you to the poster for our 67th Annual Meeting, which will be joint with the Bernoulli Society 6th World Congress in Barcelona, Spain. Please post the poster, and come to the meeting!

Students & new researchers: apply for a travel grant: see page 14.