

4. All Candidates are Usually Interviewed on the Same Day

In the UK, it is typical that all the candidates selected for interview visit the department on the same day, with the date chosen by the university. This can pose logistical difficulties if you suddenly find you need to get to the UK on short notice with no flexibility on the date! Remote interviews may be possible, but I have heard of cases when the interview panel were only available in the morning UK-time, making for a very early start in the US! Exact details of the visit vary widely—you might be asked to give a 20 minute presentation on the “big picture” of your research, or a more traditional hour-long research talk. There could also be a teaching presentation. An interview by a panel is typical. It is possible that the panel will include a Dean and a faculty member from another science department. The interview might contain questions that get you to think on your feet, so be prepared! An American friend of mine who interviewed in the UK years ago was taken by surprise by the question “What do you find attractive about the UK system?” You might need to prove that you know what you are getting yourself into!

Another difference is that, unlike in the US where the process of filling a position may continue for weeks after the interviews, in the UK the job offer is often made at the end of the day of the interview, with a tight acceptance deadline. This is certainly ideal if it is the only application you have in process, but can also potentially be problematic if you have some other irons in the fire. This does mean that if you go for a position in the UK, you should be serious about taking it if it works out.

Summary

There is a whole world out there, and there could be great opportunities for you beyond the US job market. There are certainly some challenges in seeking jobs outside of the US, notably how to find out about them in the first place. If you find a job that looks right for you, there will then be a learning curve in adapting your application to local customs. The best advice I can give is to talk to people in your professional network who can give you the inside information that will help you. There are many examples of US-trained mathematicians who have spent time overseas as postdocs, or even made their careers in other countries. The experience of being immersed in a different mathematical culture can be really wonderful and stimulating. It certainly has its challenges too, but having made the transition myself from the UK to the US, I can certainly recommend it. If you are an early career job seeker, expanding your search to other countries could be well worth your consideration.



Daniel J. Thompson

Credits

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Postdocs at European Universities. A Brief Guide

Federico Binda and Chiara Damiolini

For graduate students at American universities who want to pursue an academic career, it might be instinctual to restrict one’s job search to postdoctoral positions in the US. It is less common to apply for postdocs elsewhere, and so it is not always clear how to apply for positions in other countries, what the timeline is to do so, and which aspects of the process are different from the American counterpart. In this article, we will focus on the European job market which seems to be less affected by the Covid-19 pandemic, in contrast to the American situation where in the next years we may see a reduction in the number of available positions. In particular we will delineate the main differences in the application process, and give some guidelines that will help you navigate the job search, which can be very stressful especially in these uncertain times. We will also highlight some of the difficulties that you might encounter during the application process as well as some of the challenges and advantages that you might come across if you decide to move to a European institution for your postdoctoral position.

Before the Application

The main thing to remember when one applies for a job in academia is that the process starts early. Especially when you apply to a position in a far-away location, it is important to build a network which goes beyond your local circle. It is needless to say that the main step is to first prove interesting theorems and then let the experts in the field know about your new results. Do not hesitate to directly

Federico Binda is a researcher at the Università degli Studi di Milano (Italy). His email address is federico.binda@unimi.it.

Chiara Damiolini is a Hill Assistant Professor at Rutgers University. Her email address is chiara.damiolini@rutgers.edu.

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contact professors or postdocs who might be interested in them—maybe because you have answered one of their conjectures, or because you were inspired by their prior works—even if they do not know you. If you don't feel comfortable doing this, or you are not sure that the receiver will appreciate your efforts, you can always talk with your advisor or mentor to seek advice or to see if they can act as a mediator between you and the other researcher.

Now that many seminars and conferences are virtual, it is possible for you to participate in events which take place on the other side of the world and to significantly expand your network. Use these occasions, as well as in-person conferences, schools, or other research activities, to interact not only with your peers, but also with more senior mathematicians. Do not hide the fact that you will soon be on the job market: there is a chance that you are the person that they were looking for.

When and How to Apply

If one had to choose two main differences between applications in Europe and in the US, they would certainly be where to find the advertised positions and when the applications are due.

Starting with the former, although some universities post their available positions on mathjobs.org as well, there are other platforms—for example euro-math-soc.eu/jobs or euraxess.ec.europa.eu/jobs just to mention two of them—where positions at European institutions are advertised. But they are often not an exhaustive source of information. If you plan to work with some specific professor or at a certain university, the best thing to do would be to get in touch directly with whom you want to work with and ask whether there are any open positions. Be sure to have all your application materials ready, because if a position is indeed available you might be required to send the materials for your application in a short period of time.

Another way to receive updates on job openings is to subscribe to mailing lists in your research field. Although these are often and mainly used to advertise conferences and PhD positions, they are also used to publicize senior-level academic positions.

Also keep in mind that even when these positions are advertised on international or national platforms, most of the time each university has its own rules for the submission of the application. This can range from sending all the documents by email to the hiring committee, to creating an account and uploading all the material on a secondary website, or sometimes directly contacting the professor who is sponsoring the position to send them your material after a preliminary chat. One consequence of this, which is not to be underestimated, is that the people who write your recommendation letters have to upload or send their letters following rules which are different than the ones they might be used to. Be sure to inform them about this well in advance.

We mentioned earlier that the second important difference between American and European postdocs is when to start the actual application. Unfortunately, just as there is no common platform for the positions, the deadlines to apply for postdocs can vary a lot. Although some positions are advertised as early as nine months before the hiring date, many positions won't be posted online or made public more than five months before, and some of them might show up in the late Spring for positions from September of the same year. Of course, as with their American counterparts, it is always better to apply in advance and not wait for the last moment. This means that you should not wait to apply for positions or to ask a professor whether there are positions available at their university until the last minute. The sooner you know of a position being open, and the earlier you apply, the more chances that your application will be considered. If you are already in touch with professors at an institution you would like to work at, it might be a good idea to ask in advance whether there will be available positions in the next six months.

Postdocs at Research Centers

Similarly to the positions available at the Institute for Advanced Studies in Princeton, the Fields Institute in Toronto, or at RIMS in Kyoto, there are also postdoctoral positions at European research institutes which are not necessarily affiliated with a university. Usually applications for these positions are more standardized, with annual or biannual deadlines, depending on the program you want to apply to. Some of these institutes, such as the Max Planck Institutes (Germany), SISSA (Italy), IHES (France), Mittag-Leffler Institute (Sweden), offer postdoctoral positions which are comparable to postdoc positions at universities. Research positions at other institutes, for example at MFO or at CIRM, are instead associated with predetermined research topics and are meant to gather together experts and young researchers who work on a specific theme for a short period of time, from a few weeks to up to a couple of months.

Challenges and Advantages

We conclude with describing what might be the advantages and also some of the challenges that you could encounter moving from an American institution to a European one.

First of all, you might have to deal with more bureaucracy than you expect. You may be asked to produce many more documents for the application, or in order to sign the contract, than the ones required in the US. Although this sounds discouraging, this should not prevent you from applying to these positions. Just carefully read what they need when you start the application. If you get the position and there is a lot of paperwork to do, remember that you won't be the first one dealing with the situation and you can always ask other members of the new institution how to deal with this challenge.

Related to the bureaucracy, keep in mind that you might need a visa to work in Europe and, depending on your citizenship, this could take some nontrivial effort. Depending on the type of visa you will be issued and whether your institution belongs to the Schengen-area or not, this might allow you to easily travel to other European countries without asking for other visas. If this is the case, then you will be able to travel freely within the Schengen-area—which encompasses most EU States, except for Bulgaria, Croatia, Cyprus, Ireland, and Romania—in order to attend conferences or visit your collaborators at other universities. Europe is large and diverse, and it can provide an excellent opportunity for you to meet and get to know different cultures.

Another aspect that might be scary is the language. Unless you are considering only positions in the UK or Ireland, you might end up living in a country where English is not the first spoken language. Depending on the country where the university is located and on the size of its international community, this might be a marginal problem or a very serious issue to consider. In any case, it is important to remember that most postdoctoral positions in Europe do not involve mandatory teaching, and you are usually not required to learn the local language to do your job. It can however happen that in some universities some research seminars or advanced graduate classes you might be interested in attending are offered in the local language. But it can be an excellent opportunity to improve your French, or German, or Spanish, or Italian, or...

In conclusion: do not hesitate to broaden your horizons. Maybe the job you are looking for is on the other side of the Atlantic.



Federico Binda



Chiara Damiolini

Credits

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Giving a Job Talk

Brian Lehmann

Congratulations on being invited to interview! The last major piece of your application is the job talk. Math departments take these talks seriously: a good job talk will generate excitement about your candidacy but a bad job talk can derail your application. This is your final opportunity to make your case for the job and you should make the most of it!

The goal of this article is to describe how to prepare for your job talk. I will assume that you have been asked to present on your own research (either for a teaching or a research position).

While preparing this article I have drawn from several resources on how to give a compelling talk. There are many other good references out there—including some in previous issues of this journal—and I will provide a short list in the bibliography.

Overview of the Talk

If you have been invited to interview for a job, there is a subset of the department—perhaps the professors in your discipline or on the hiring committee—which believes that you are a strong candidate. They are already convinced! However, the entire department will have a say in the selection process. Thus:

The main goal of your job talk is to convince the entire department to support your application.

Expectations for your talk

The professors attending your job talk may not have a chance to interact with you during the rest of your visit. This is your main opportunity to convince them of your qualifications for the job. Here are some questions these professors will have in mind while they listen to your talk:

1. Does this candidate do first-rate research (if applying for a research position)? If you are applying for research jobs, there is no substitute for outstanding research.

2. Is this candidate a good teacher? It is difficult to assess the quality of a candidate's teaching from their applications and letters. However, many departments do not require candidates to give a teaching presentation. Thus the job talk is often used as a proxy. This is not wholly unreasonable—a candidate who can explain one topic clearly can probably explain other topics clearly.

3. Would I be able to talk math with this candidate? Successful mathematicians often need to communicate their ideas to nonexperts—during colloquiums, while

Brian Lehmann is a professor of mathematics at Boston College. His email address is lehmann@bc.edu.

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