

This section is for Early Career Researchers. Please send suggestions for questions or topics you would like to see covered to newsletter@lms.ac.uk.

Excelling at interview

“Dear X, I am a PhD student/postdoc. I’m applying for jobs outside academia. Can you suggest ways I can do well at interview? What sort of questions should I expect?” — We invite perspectives from professionals with experience as interviewer and as interviewee.

Anna Railton is a Consulting Mathematician at the Smith Institute for Industrial Mathematics and System Engineering. She has a PhD in astrophysical fluid dynamics from Cambridge.

Tim Smith is a Fellow of the Institute and Faculty of Actuaries and has worked across pensions and life insurance. He has a BSc in Physics from Warwick, and an MSc in Actuarial Science from Imperial College.

You should definitely expect to be asked to explain your PhD/postdoc research at some point. You will need to be able to give a concise and clear explanation of it to someone who is, almost certainly, not in your field and is also unlikely to be a mathematician. Practise both a short (1 minute) and longer version of your elevator pitch to friends and family and ask them for feedback. Being able to communicate your work clearly to a potentially non-technical audience is essential in industry and this is the perfect opportunity to prove you have these skills.

Employers will also want to know how you can apply your problem solving skills to their real world problems. So it is essential to research the sector and the companies where you are applying for jobs. Think about the sort of problems they may have and how you could solve them.

I have personally been caught out in interviews by forgetting some basics from first year undergrad. Avoid this frustration by brushing up on foundational topics you may not have given any thought to for a number of years. For example, can you still solve a differential equation, explain how you fit a curve to data, or solve simple probability/combinatorial problems? A small amount of research into the sector you are applying to can give some indication of what you might be asked about.

There are three things that I would be particularly interested in exploring with you. The first is what your research could contribute to the role that you have applied for. This could be because it is directly relevant to the job, but more likely it is something tangential. The statistical techniques employed in PhDs from many fields are often a lot more advanced than those I see in the office for example, and it is worth thinking before the interview of areas where you think you could add value quickly.

Secondly, I would be interested in your motivation for changing direction in your career. After making a significant commitment to academia, a decision to move into the very corporate world of financial services is a big one. The mention of money as a motivating factor is often avoided, but I find it refreshingly honest if people acknowledge this. Go into the interview armed with a clear narrative of what has driven you to apply for the role and why you think you will enjoy it.

Finally, it is important that you understand the study requirements for the role you have applied for. If you are applying to become an actuary, for example, then you can expect another three to five years of study, a significant proportion of which will be in your own time. Do your research into everything the role entails, and be prepared to demonstrate this knowledge.

Watch out for a feature on interviewing for academic jobs in a future issue of the Newsletter.