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*Link: <https://www.findaphd.com/advice/blog/6038/how-to-find-the-perfect-phd-position-in-stem>*

## **How to Find the Perfect PhD Position in STEM**

Some people are lucky in that their undergraduate or Masters research is interesting enough, the group nice enough, and the supervisor good enough to want to stick around. If the group has a PhD position available when you want it, even better!

However, this isn't the case for everyone. You might find that the topic you started working on for a placement isn't what you thought it would be. Or maybe you'd rather work with different techniques, or the group might not be the best environment for you.

You may also have come to the realisation that you want to spread your wings and move (abroad). And then there's the scenario where you want to stay, your supervisor would like to keep you on, but there's not enough funding...

So, if you are pondering PhD research, read on for some food for thought and tips for finding the right position.

### **Is PhD research right for me?**

It's good to thoroughly investigate whether PhD research is the right step for you. This may be especially important if you have only done an undergraduate degree, because you likely have little experience in the lab.

Moreover, PhD research requires a lot more independence and responsibility than you are used to from your undergraduate studies. So, even though in many countries you will be considered a 'student' whilst doing a PhD, it is much more like a 'real' job than undergraduate studies.

It will pay off for you to explore 'real' job opportunities already during your undergraduate course: start with that in year two if possible! There are plenty of jobs for which you do not need a PhD, and if you have no intention of having your own research group in the future, a PhD might not be a necessity for you.

If you then decide you do in fact want to go into academia or that in order to rise through the ranks of your desired industry career you really need a PhD, you can always start a PhD in your late twenties or even in your thirties. By then you'll be more mature, more experienced and perhaps more committed because you know why you are doing it.



It doesn't hurt to get more lab experience and to give yourself some more time and exposure to figure out whether PhD is the best next step for you. Especially if you have just finished an undergraduate degree, why not do a Masters or MPhil first? You'll learn a lot during that year, and if you end up doing a PhD in the same group you'll benefit even more. You might be able to find (partial) scholarships to fund your Masters, so it doesn't have to cost you more than a year of your life.

### **Talk to people!**

If you are doing a lab project, you will meet a lot of people who have a PhD, are working towards their PhD or who have done an undergraduate degree and then started working as a technician or lab manager. Talk to them! Ask them about their experiences and motivations. Talking with others will help you get some new perspectives and also help you to evaluate why you want to do a PhD, or why you might be in doubt.

In addition to talking to people who work in academia, try to talk to people who work in industry or business through things like networking events, career fairs, or friends of friends. You can also contact people through sites like LinkedIn if you are interested in their position or career trajectory and want to ask them about it.

### **How to find a group**

Okay, so you know you want to do PhD research but have no idea how to go about finding a position. Well, ask yourself why you want to do a PhD. Does a particular field or topic fascinate you, or perhaps you are really keen to become an expert in some technique, or you have a specific problem you'd like to work on. Or maybe you see the PhD as a stepping-stone to an industry career. Great, use that to start your search.

Read papers on the topic of your interest to figure out how certain problems are studied and which groups are the key contributors to the field. Check out these groups' webpages to see if there are any PhD places available. You can also e-mail the group leader directly to show your interest as they might have space for PhD students but haven't yet advertised it.

However, if you haven't developed an interest in any one research topic in particular, you can go about it differently and think about where you would like to live for a couple of years. Because PhD research will require you to live in the area of your lab, you will get to experience life and the culture there. So, if you've always wanted to spend time abroad, PhD research might offer you this opportunity.



## **Evaluate the location**

So, you found a group of interest, but will you enjoy living in that city?

It can be hard to know beforehand what life will be like in another city, in another country, with a new climate and culture. People experience the same place differently due to contrasts in personality, disposable income and family circumstances. It is thus conceivable that whilst a wealthy friend of yours had a great time in some city in France volunteering for a charity for six months, you might find that doing a PhD in that same city for 3+ years on a small stipend makes you miserable.

You don't just need a PhD position, you also need to be in a place where you can afford housing that matches your needs, a social scene outside of your research group, and activities you enjoy to blow off steam and to relax. If you know yourself well, it is easier to set limits on your surroundings. Perhaps you need to be in a bigger city because in your spare time you enjoy a vibrant nightlife, quirky second-hand markets and the big gig every now and then. These are things you might not find in smaller cities.

## **Not sure about the lab?**

If you found an interesting topic and a good group but you aren't ready to commit to a PhD yet, you could find out whether they would be interested in taking you on for a short-term project. You can then see whether you enjoy working in that particular lab and whether the research topic is interesting enough to you to want to stick around for another 3+ years.

Especially if you're able to find your own funding for such a short-term project, you might easily find a temporary position. A trial period like this is not only beneficial to you but is also a good opportunity for the group to evaluate you. When they then have a PhD position available, they might be more inclined to take you on as opposed to an outside candidate.

## **Do your homework before applying**

When you apply for an advertised PhD position or send an e-mail to a group leader to enquire about the possibility of doing your PhD research there, make sure you attach your CV and write in your e-mail or cover letter who you are and what you are looking for.

Show that you know what the group works on, explain what you'd like to work on and why, and ask whether there are any vacancies coming up; you won't need to attach a detailed project proposal at this stage.



Many groups get plenty of requests so they can't accept every applicant. It is therefore really important that your application is the best it can possibly be. To do this, focus your efforts on a handful of applications. Do not send out dozens of generic emails (this is known as the shotgun approach). When using the latter strategy, the recipients will immediately see you haven't done your homework. Why would anyone take you on when you couldn't be bothered to evaluate whether the work of the group aligns with your interests, and whether your skills are a good match to start research in that group? Quality over quantity! Every. Single. Time.

Don't be disheartened if you find a vacancy for which you are a strong candidate, but after applying you find that you didn't get it. Especially high-ranking universities and 'famous' research groups will get a lot of strong applications, and sometimes you are good enough but someone else has a stronger CV. Rejection happens, so don't put all your eggs in one basket!

## **Conclusions**

PhD research can be very exciting, rewarding and interesting and it gives you many useful skills and experiences for a career in academia as well as in industry. However, PhD research is also demanding and requires a lot of independence, persistence, and sometimes sacrifices. If you think about it carefully, explore your options and know yourself well, you will be able to find the best position for you!

So to recap:

- Do research on career opportunities available to you without a PhD
- Talk to the people around you, talk to people in business/industry
- Do an MPhil or Masters or a year in industry to figure out whether research is exciting and enjoyable to you

If you decide to go for a PhD:

- Find research groups of interest based on topic, techniques, or location
- Read key papers of the group(s)
- Consider a short-term project in the group(s) of interest
- Less is more: spend a lot of time on a handful of quality applications

Good luck!