Finding an Advisor

Faculty Responses
Responses from faculty including:

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When should a potential advisee reach out to you?

- Anytime is fine. Before quals, I will at times give students papers or books to read, although without much expectation. When quals come, at times I have helped some students study, by posing questions in a kind of oral exam format. After quals a more standard kind of format can take over (weekly meetings, reading papers, addressing problems, etc.). If a student comes to me after the end of the second year, I will likely want to see that they have taken (and succeeded at) courses in my area, and hopefully have a clear area of interest, due to the necessity of passing advancement. (JS)

- The earlier the better. For example, before admission. Ph.D. is about research, so the earlier one starts on it, the better. Many advisors insist that the exams be taken first, but a discussion can be initiated before then. (RV)
When should a potential advisee reach out to you?

- Students should feel free to reach out to me anytime, and the earlier in graduate school, probably the better. I have a strict policy of not formally taking a student before they pass their quals (since passing quals is a must-do to stay in the program, I want to make sure that our work together doesn’t get in the way of that). That said, I regularly do directed readings with students who have not yet passed their quals as a way of getting to know each other, so just because we can’t formalize the advisor relationship before quals are passed doesn’t mean that we can’t begin exploring if this seems like a good idea. (JW)
- Right after passing Real Analysis and Complex Analysis qualifying exams. (KK)
- Any time is good (Nko)
When should a potential advisee reach out to you?

- As early as they have time to devote to start getting familiar with potential topics of research. (PG)
- I would strongly prefer that students interested in doing research in number theory get in touch with me as soon as possible, even in their 1st year before they have had a chance to take the number theory course. There are a lot of things students can do early in the program to prepare themselves for research in number theory later on. I think a lot of students don't do these things because they don't know what they should be doing-- that's why you should ask me!

It is important that students start thinking about potential research directions early, rather than waiting until after finishing Math 232. (NKa)
How would you want someone to reach you? What would you not like to see?

- Email (RV)
- E-mail is of course fine, and usually based on that I will set up an initial meeting (which now of course could be done online). On the other hand some students initially came and knocked on my door (also fine), although this is not really possible right now. (JS)
- Email is fine. Stepping back, an advisor/advisee relationship is a major commitment on both sides. The student is signing up to work closely with the professor and to have this professor play a defining role in their graduate experience and beyond. Similarly, the advisor is signing up to invest time, energy and resources into the student, over a period of many years. It’s a good idea for everyone to go into this recognizing the nature of the commitment, and having a chance to explore the relationship before committing. For me, this means I ask every student who wants to work with me to do at least one term of a directed reading together before we officially become advisee/advisor. This gives us a chance to see how we work together, establish good lines of communication, etc. (JW)
- Please send me an email, and then we will meet to discuss research interests and possible projects. (NKO)
- Asking for a meeting in person. (PG)
- By email, or in person (when the situation gets back to normal) (KK)
How would you want someone to reach you?
What would you not like to see?

- I would like a student to first contact me by email. In such an email, I would like the student to explain their background and mathematical interests, and why they are contacting me. I think it's a good idea for these emails to include things like, 'I have been reading on my own about X topic and think it's very interesting. I would like to learn more about potential research projects in this direction. Would you be able to tell me a little bit about the kinds of projects that your graduate students have worked on recently?' Things like that.

When I was in graduate school, part of the process before finding an official advisor was to try out a 3 week project where you contacted a faculty member and they suggested something you could read about. You would then write up a summary and prepare a presentation. The faculty member was there to help answer questions and guide you through the process. I really like this idea-- I think it's a good way to get a sense of how the faculty member thinks about math and whether you could work well together. It's also a good way to practice the important skill of learning new math independently in a short time frame.

I do not think it's a good idea to have your first email contact ask for someone to be your advisor. Finding an advisor should be a longer process that involves input and agreement between the student and the faculty member. I think it should include something like a reading course or a mini research project first. This is part of why it's a good idea to start this process early. (NKa)
Can you speak as to what availability students can expect based on tenure rank?

- I am not sure if rank matters. It varies person to person more than rank to rank. (NKO)
- I think that there may be a difference between pure and applied math rather than tenured or not tenured faculty. I think that it is quite difficult in pure math to work with more than 2 students or maximum 3 students at a time. Perhaps the situation in applied math is a little different. (KK)
- I try to meet with each student for at least an hour a week, especially pre-advancement (this has been honored in the breach more than I’d like given the constraints of the pandemic, but still generally held to). In addition, I ask that each of my students commit to attending a weekly one-hour research group meeting with all of my students and postdocs. (JW)
- I set up a weekly meeting with all students, and tell all students that they are always free to knock on my door, or e-mail questions whenever they have them. Some students use this, some do not. This did not change as I got promoted, and I think is fairly standard across all ranks. (JS)
Can you speak as to what availability students can expect based on tenure rank?

- I advised several students as an Assistant Professor before I had tenure. I think it's pretty common for Assistant Professors to advise one or two students before tenure, but more than that strikes me as unusual (in the pure side of math anyway). I also would not encourage new faculty to officially start advising students in their 1st year as an Assistant Professor (but some will want to anyway-- I picked up a student in my 1st year).

There are some faculty who are comfortable advising many students at once. My understanding is that this is more common on the applied side of mathematics. On the more pure math side, I think it's not uncommon for tenured faculty to advise 3 or 4 students at a time. There are some professors who advise more (5 or 6), but it's not so common I think. (NKa)
What number of students do you think is comfortable for you? (For others?)

- At this point I have settled on one student per incoming class. I know others follow this policy, while others take less. I think in exceptional cases some take more. (JS)
- I try to meet with each student for at least an hour a week, especially pre-advancement (this has been honored in the breach more than I’d like given the constraints of the pandemic, but still generally held to). In addition, I ask that each of my students commit to attending a weekly one-hour research group meeting with all of my students and postdocs. (JW)
- I can have many students, because I have lots of projects that I am thinking of. (NKa)
- I am very happy to work with 2 students at any given time. (KK)
What number of students do you think is comfortable for you? (For others?)

- The COVID-19 remote learning situation has affected faculty in different ways. I have a young child and his daycare is still not fully reopened. I also find that creating videos for Math 206 takes many many more hours per week than it does to lecture in person. Because of this, I am completely overwhelmed and have no capacity to start working with additional graduate students.

  In a more normal time, I think I could be comfortable advising 3 or 4 students at a time. This depends on the students--- a student who is struggling requires more time and mentoring than one whose research is going really well. (NKa)

- 2-3 (RV)
- 2-3 students at any given time. (PG)
What general advice do you have for students for reaching out to potential advisors, especially in a purely virtual setting?

- Reach out, and don’t take it personally if someone is not available. We are all under lots of different stresses during the pandemic and it’ll take some time even after it ends for everyone to get back to full speed. In general, it’s good to remember that if someone says, “No,” it’s probably not about you, and this is even more true now. (JW)

- I still think that e-mail should be a fine initial contact. It is unfortunate that professors cannot get to know students face-to-face through courses right now, but I think e-mail is still a reasonable start. (JS)

- Do your research about the potential advisor’s interests, participate in activities they organize, request a reading course with so as to get to know them better (PG)
What general advice do you have for students for reaching out to potential advisors, especially in a purely virtual setting?

- It is important to have a clear idea about the kind of math that your potential advisor is doing, so getting acquainted with some recent papers might be a good idea, even at a superficial level, just to see if this kind of math appeals to you. (KK)
- I think it’s better to start early. Sign up for 299 with a professor, see if you like the type of research they do. You can try several different areas before you find something you love. I haven’t noticed any problems with having virtual meetings, they work well for my students, I think. (Nko)
What general advice do you have for students for reaching out to potential advisors, especially in a purely virtual setting?

- I think it’s very very important that you contact potential advisors early in your graduate studies, especially if you are interested in Algebra/Number Theory. I think waiting until the end of your 2nd year is a mistake. Finding an advisor should be a process that takes several months-- you contact someone, they suggest something you could read, you meet to talk about, they suggest more things you could read, and so on.

I also think it’s helpful if you can be specific about your interests when contacting a potential advisor. Have you read any of this person’s research papers (even if you don’t understand the details)? What kinds of things that they work on seem most interesting to you? Have you been reading about these topics on your own to try to prepare yourself to better understand what research in this field would mean?

I think it makes sense to talk to multiple potential advisors. Different people have different styles and it makes sense to try out a few different things before you make a final decision on what kind of research you want to do. You shouldn’t ‘put all your eggs in one basket’. (NKa)
Other resources

- Michigan’s advice on Finding Your Advisor
- Michigan’s faculty input on Choosing an Advisor
- Math stack exchange conversation on How to pick an advisor?
- AMS Blog posts: The Minimalist Approach to an Advisor
- For UCI, some summary results of faculty interests can be found by going to faculty pages, asking faculty directly (do this), or some materials prepared for UCI recruitment events (for example, at JMM 2021 some materials can be found here, including a faculty summary file)