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# *Planning for an Academic Career: From Grad School to Tenure Track*

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## *Graduate school – Early years*

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- Qualls and other PhD related initial screening exams --- finish ASAP
- Seminars and Talks --- attend as much as possible
- Talk to other professors, senior grad students, postdocs as much as possible
- Read popular magazines such as Nature, Science, IEEE Spectrum, OPN etc...
- **What's hot? What excites you? What problems are being studied now, and what problems remain to be solved.**
  - When you graduate 5-7 years from now, will your topic saturate ?
- ***If you don't have an advisor already, decide on a topic and choose an advisor till the end of your second fall/winter***



## *Graduate school – after 1<sup>st</sup> year*

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- After you found an advisor, now comes the **depth** requirement!
- The deeper you get in your field the closer you are to graduation.
- READ, READ, READ! **Read everything in your field** (journals, books, reviews, popular articles, ppt files etc).
  - This is literally the best time of your career to educate yourself solidly.
- MEET, MEET, MEET!
  - Establish a weekly meeting (at least) with your advisor. Helps to keep you focused.
  - Initially you will benefit from this.
  - Later on your professor should benefit from these meetings. (that will indicate that you are close to graduation)



## *Graduate school – after 2<sup>nd</sup> - 3<sup>rd</sup> years*

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- Starting with your 4<sup>th</sup> year, your advisor is now a member of your family!
- Papers and conference submissions.
- Presentation skills for giving effective talks.
  - Practice makes perfect.
- Writing skills.
- Without these two skills (presentation and writing) you can never be a top level professor!
  - Rehearsals, technical writing and presentation workshops, english department professional help etc..



## *Graduate school – Close to graduation!*

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- If you have sufficiently high quality publications (discuss with your advisor and phd thesis committee members) then you should consider directly applying for a faculty job
- If your advisor AND the other professors in your committee agree that you badly need a postdoc or industry experience follow their advise!
- 6 months before the official date of graduation you should start looking for a postdoc or industry position.



## *Postdoc search!*

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- If your field is saturating, you should look for new fields that might benefit from your background.
  - Don't be afraid of switching fields for the postdoc. This will be an investment for your breadth and will pay off when you are a faculty.
- If you are getting fantastic attention from the field and from the press on your PhD results, it may be worth choosing a postdoc on a similar topic, to make you the best of the best of a particular field.
- If you send 40 postdoc applications, typically only 10 of them will return to you with an answer. Don't take it personal.



# *Postdoc Interview and Decision*

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- Finding a good postdoc is the easiest task of one's academic career.
  - Don't panic!
- While being interviewed you should “definitely” also interview the group.
  - What does the PI think that you will contribute to his/her group?
  - For how long is the expectation?
    - An ideal postdoc in engineering is 2 years (in general). For experimental fields this can increase to 3-4 years.
  - What is the typical work load? Are you fine with that?
  - What are the previous postdocs and PhD students of the same group currently doing?
  - Are the group members happy? --- make sure you meet with the students and postdocs while the PI is away.
  - Will the PI support you after your postdoc? How? Any examples of that in the history of the group?



## *During Postdoc – Year 1*

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- Postdoc is all about getting results.
  - Be focused from day 1 towards getting results.
- At the same time, “postdoc” is your last chance to broaden your horizons. Read read read!
- **Come up with ideas, and a vision that will create the next 5 years of your research.**
- Ideally within the first 15 months you should have got 2-3 initial results to generate 2-3 journal papers. More ideally within the initial 8 months you should at least have 2 publishable high impact results, that can serve for your job talk.



## *During Postdoc – Year 2*

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- Start putting together your ideas and vision
  - **Make sure it does not conflict with the PI.**
  - A bad postdoc experience will NOT help your faculty search, and your postdoc advisor is potentially your savior.
- Start writing proposals, and participate the PI's grants, contribute and learn what it takes to bring in money.
- Start looking at the PIs management style to get inspirations (if any available) for your own.
  - **Most often management of students is the biggest challenge for a young faculty.**
- By June of the second year, you should start discussing your job situation with the PI
  - Get his advise and recommendation for the job openings.
  - Ask him if he knows an opening.... Can he/she call a friend??



# *Job Search – getting an interview*

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- 2 page research statement + 1 page teaching statement and a current CV is adequate.
  - If you have done a fruitful postdoc preparation, this task is a piece of cake.
  - *Can ideally be done in a weekend* if you already did the necessary brainstorming during your postdoc.
- Cover letter --- not so important (there are different opinions on this!).
- Most important things in an application folder for initial screening:
  - Research Statement and your Field (has to match the need or has to generate excitement)
  - CV
  - Recommendation letters (+ who is pushing your case)
  - The rest is not so important for getting an interview.



# Job Search – The Interview

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- You should have a “perfect” presentation. (*if time permits, at the end I will focus on presentation skills after Q&A*)
  - Should rehearse it with all your professors that are available.
  - Should rehearse it at least 5-10 times!
  - No rush, but not too slow as well. You need to impress!
  - Presentation is very important but is not everything.
- 1-on-1 interviews with the faculty is very very important.
  - Positive energy is everything.
  - Don't get anything personal, even if you have ALL the reasons to get personal.
  - Know your champions! Who are the faculty members that really want you to join. This usually is your host (most often)
- Know the school, the department, and your potential colleagues
  - You should even know their pictures, CV details, research interests, seminal contributions.
  - compliment the strengths of your potential school/department/colleagues and know the areas that you can contribute



## *Job Search – After the Interview*

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- Interview process is the least productive time period of a scholar.
  - Don't worry, it happens to all.
- You should wait for the schools to get back to you
  - Usually there will be a second visit and even third.
  - These visits are for convincing you... yes finally you are the king/queen
- For negotiations there can be only one argument for asking more:
  - To build the most competitive research program I will need these additional etc...