Hints for Finding Non-Academic Research Positions (Postdoctoral and Permanent)

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Where is Non-Academic Research?

- National Labs
- Federal Research Centers
- Industry
- and at Universities (Research Scientist positions)

Where to start looking? On-campus!

- Go to your school's Career Center.
- Sign up to have your resume critiqued by people from industry and national labs.
- Sign up for on-campus interviews.
- Make a list of companies interested in mathematicians and applied mathematicians.
- Use Career Center resources and the web to learn about companies.
- Go to on-campus Career Fair - practice your sales pitch on recruiters.
- When? Start in August or September.

How not to fail when looking off campus

- Look at AWM, SIAM, AMS job ads.
- Set up a web page and a "emailable" resume.
- Search the web using words from your specialty area.
- Search the journals in your field. Send letters (with resume attached) to everyone in your area with a non-academic address.
- Send letters and resumes to people you met at conferences.
- Expect very small positive response rate to letters sent to email sorters or personnel offices. Make an additional approach through a "mathematical" employee.
- Respond only to ads which are at least somewhat applicable to you. Explain your interest and abilities in your letter.

Postdoctoral Fellowships?

- Government sponsored fellowships: National Science Foundation, National Research Council.
- Fellowships through National Lab: Find potential postdoc advisor, ask him/her about mutual interest and application process.
- Some large companies with research departments hire postdocs- ex. IBM, Bell Labs, Lucent.
- Best approach, make someone interested in you and they will make a postdoc position for you.

How to sell yourself

- Explain how your research skills can be applicable to more problems.
- Emphasize teaching skills, ex. organization, management.
- Do not worry about not knowing a particular skill or computer language. Emphasize your willingness and learning track record.
- Discuss willingness to work with non-mathematicians or in groups.
- Be able to discuss your research with a non mathematician and have them understand and appreciate your efforts.
- Learn the "buzz words" in your application area used by non-mathematicians. Explain your work/interests with respect to these "buzz-words".
- Do not apologize for your lack of job or application experience. Be confident that your mathematical skills will be valuable to your employer.

Surviving the interview

- Practice interviewing beforehand. You do not need to rehearse, but you probably would like to give thoughtful answers.
- Get the interviewer to tell you about the group and the job.
- Ask thoughtful questions. Find out the interviewer's technical background so you can explain yourself appropriately.
- Explain how your skills would be useful to the employer.
- Talk about what kind of environment you work best in and your expectations.
- Be able to say succinctly why you want a non-academic job.
- Be truthful, be honest, be polite, be open-minded, show enthusiasm. Dress to show your respect for the interviewer.
- DO NOT BE RUDE EVEN IF YOU HATE THE JOB/INTERVIEWER. You may interview with five groups and find one is a perfect match. Don't destroy your chances of getting that job.
- If you name drop- be sure the "name" you drop knows you well and would indeed recommend you.
- If you get to an interview you are nearly there. Let the interviewer see that you would be someone that they would like to work with. Relax. Be yourself. Keep it professional.

Planning ahead and testing the waters

- Go to conferences. Give talks, posters.
- Go to conferences. NETWORK!
- Apply for industry workshops - IMA and NCSU for students, RPI for advanced.
- Do an internship.
- Go to industrial math seminars.
- Participate in a group research project.
- Sign up for a mentor with AWM or SIAM.