Preparing for a Job Interview
Disclaimer

- This is my own VERY Personal Point of View
- Don’t take this as gospel – but as a starting point.
- Talk to other people and form your own opinions
- Most of what I say will be obvious

- My goal is for you to avoid the dumb mistakes that take you out of the game before the game even starts!
Solving the Puzzle....

- What qualities does an ideal physicist possess?
  - Ability to manage people and projects
  - Ability to perform original and important physics analysis
  - Able to solve Technical Challenges with grace and ease

- Each hiring committee will eventually have to come to grips with how to weight each of the above...

- Don’t forget personality - or lack there of! It matters

- Committees are not necessarily after the smartest person - but that they want that best that they can find. AND This person has to be someone they want to work with for the next 30 years!
How to Apply

- Get the word out that you are looking for a faculty position - lots happens in this field by word of mouth
- Check the Ads in Physics Today
- The experiments keep a list... - check it
- If there is a place that you really want to be at - write the chairman a letter and follow up with a phone call. Be aggressive
- Whether you should be “picky” or apply for every job under the sun is a very personal choice
How to Apply (2)

- Call the contact person and ask him about the job
  - ask him what they are looking for
- Read the ad and follow the directions
  - How many references
  - Do they want the letters sent or just a list of names?
  - When is the deadline?
Start early preparing these documents - as in NOW!
- Keep them current during the year as you make additional contributions

Do NOT make job hunting your full time job. STAY PRODUCTIVE
- You will be less nervous
- You will have more things to talk about because you are working
- Your visibility within the collaboration will remain high
- Be disciplined - work on analysis during the day and job stuff in the evenings/one weekend day or whatever arrangement suits you so you can keep things separated!

Read enough to know what is going on in our field and be prepared to talk about it
CV and Cover Letter

- CV should not just be a list of accomplishments.
  - Give enough detail and try to make it interesting.
  - Someone should be able to tell what you ACTUALLY did by reading it
  - Get comments on it from people you trust

- Cover letter - IMPORTANT
  - Tailor it to the department you are applying
  - Talk about what you bring to the department and what features of their research program interest you
  - Emphasize again the highlights in your CV as well
The Talk

- Seminar vs. Colloquium!!
  - Know what type of talk they want you to give -- ASK
  - Some schools may even want both

- Colloquium
  - Keep it simple
  - Can you teach a difficult subject to the non HEP community
  - Be enthusiastic
  - Take the time to really explain the plots you do show
  - Tell a story!

- Seminar
  - It should be something you did
  - It should be technical but not overly technical – pick something like a systematic or acceptance and take them through the detail to show you know it – but NOT everything
  - Explain the plots – audience is HEP but doubtful in your specialty
  - There should be a “common thread” throughout

- Once your talk is prepared, call people and volunteer to give a seminar at their institution – PRACTICE IT!
Letters

- Letters are the single most important part of your application package. Without great letters, you will never get a chance to move to the next step!
- Given the importance, you need to pay attention to them!
- All places require letters - 3-5, some require more
- Come up with a strategy for who would write one on your behalf - get 6 names and prioritize them in your own mind

What makes a good letter writer?
- The person who wrote it can speak in detail about you and your work
- That person thinks highly of you and your work
- Letter writer is well known in the field
- Letter writer knows how to write a good letter....
- Most letters should reference your most recent work, not the work you did as a graduate/undergrad student
Letters - Part B

- People to ask
  - Boss/advisor
  - People familiar with your analysis, a god parent for example, other faculty that are paying attention in the physics group in which you work
  - Select people from the most recent part of your career, one is more than enough from your graduate work

- People you may also want to ask
  - Spokesperson - typically busy, write lots of letters and often times write “cookie cutter” letters that are neither helpful nor hurtful - how well do they really know you?
  - Physics Convener/Coordinator
  - Lab Personnel - may not be used to writing the type of letter that is required

- People you don’t ask
  - Mom -- obvious
  - Peers - their letter does not carry sufficient credibility/weight
  - Friends - puts them in an awkward situation
Help the letter writer

- Give them names, addresses where you want letters sent and give them sufficient lead time to do your letter justice
- Make it clear when the letter is due
- Give them a copy of your CV
- Don’t assume they know all about you - prepare a one page list of your most significant accomplishments/strengths that they might use in their letter - don’t make them search those out from your CV
- Sit down with your letter writers and talk to them about yourself.
  - What are you looking for
  - What kind of career do you want
  - What is your “ideal job”
It is helpful to get an early look at your letters - and to adjust the list according to what is written

- If you have a weak letter, you want to get it out of the packet as soon as possible
- Easier said than done....
- Recommendation
  - Apply early to a place where you may have a friend on the committee, and ask that person to read your letters and get feedback
  - Ditto for your boss - it may be easier for him to get this info
  - Target a place where you have an inside track even if you have no interest in that job to get that important look.
  - If you can’t – its not the end of the world but it does help
Appearance is Important

- You have invested 4 years in college, 5 years in graduate school, and 3+ years as a post doc.
- Shouldn’t you invest in your job search?
- Gentlemen
  - Day 1, suit and tie
  - Day 2, sport coat and slacks (again a tie!)
- Ladies
  - Business-like and smart
  - Err on the side of conservative
- Spend the $$$ and get items that fit well (e.g. altered properly)
- Haircut, belt, shined shoes, matching dark socks, and clean finger nails are NOT optional
Once you get “the call” – it’s time to game plan

- Get on the web and check out the department
  - How big is it
  - What do they do
  - What are its strengths?
  - Then look at the HEP group – theory and expt.

- Talk to people here at FNAL who are familiar with the department

- If you get your interview schedule ahead of time, find out what you can about your interviewers. What are their physics interests,

- READ! Be broad. Understand the issues facing the field. Have an opinion. Be consistent. Most of the questions asked will not have a “correct” answer.
Questions you may hear...

- Tell me about yourself....
- Why are you interested in particle physics
- What are your short, medium and long term career goals
- What are you going to bring to this group
- How are you going to secure funding
- What are 3 words that best describe you
- What is your biggest weakness and what are you doing about it
- What achievement are you most proud of
- What motivates you
- Who is your hero and why
- Where do you think the field is heading
- What direction should Fermilab head in
- What do you think about X (RIA, NLC, NOVA,...)
- Who is the best post doc on the job market right now?

I have a list of all the questions I have ever been asked - I will send you that list to you if you are interested.
Game Day

- Stay calm and relaxed - after all, you get to spend an entire day talking about your favorite subject - YOU!
- Have fun with it! It will show!
- Bring a few copies of your CV and have backup of your talk (laptop + memory stick)
- Take care of the simple things
  - Shake hands (firmly)
  - Look people in the eye
  - Listen and pay attention - they will be selling themselves at least as much as they will be asking you to sell yourself.
  - Remember to smile!
Interview Pointers

- Interview usually means lunch and dinner with some portion of the committee.
  - This is STILL part of the interview - don’t get too relaxed and do NOT drink too much – save that for the hotel room later!

- Have some prepared questions for them
  - Teaching loads
  - Travel guidelines - are they used to HEP types?
  - What is the group’s/department longer term hiring plans and strategic direction
  - Tenure? - I typically stay away from this, as I do salary. Those can be answered once you get the job offer!

- The Dean
  - His (or Her!) role in the process differs from place to place.
  - Impress him/her! If you get the offer -(s)he is who you negotiate with for start-up funds. Best to start off on the right foot with this individual
More Interview Pointers

- Your experiment – know what's going on!
  - How is the accelerator performing
  - What was done during the long shutdown
  - How is the COT performing
  - What fraction of the Silicon is working
  - How much Luminosity has CDF acquired?
  - What are the expectations for delivered lum in 05, 06, 07
  - It's embarrassing to not know this stuff!

- Practice
  - Ask someone to interview you
  - Talk to last years success stories and ask for advice/pointers
  - Interview skills like analysis skills require work in order to be good
Follow Up

- Ask what is the next step is - BEFORE you leave
- Send a written thank you note the next day - email is fine these days...
- They may ask you to do some homework - DO IT!
  - Typical example would be to prepare a start-up package budget

- Be Patient
  - Don't keep calling for progress/status reports
- If you haven't heard by the agreed upon date in bullet number 1, go ahead and call
- If you are not a finalist after the interview, it is ok to ask why - where did you fall short, what could you improve, what experience are you lacking...
  - Not everyone is comfortable telling you this, and you may not like the answers but you need to hear it.
For Students looking for Post doc’s

- Decide what experiences you are lacking in your graduate student career and look for a post doc that can give you those

- Don’t

- Ignore institutional names and salary - in the long run, neither matter

- Look for a place where you feel comfortable - with a boss that you WANT to work with.
  - It’s all about relationships!

- When you are interviewing - ask where their previous post doc’s are now...
  - Do they have a record of placing their people
  - Past performance does not indicate future success (and vice versa) but...
Feedback from this year...

- Talks are far too technical
  - Seminars are written as full status talks, and colloquia are seminars!
  - Just because they are HEP does not mean they do your measurement for a living
  - Too much CDF Slang in them
  - Make them much much simpler!

- Missing the simple questions
  - Expect to get a lot of questions where you are asked to extrapolate Tevatron experiences to LHC.
    - B tagging in a high lum environment
    - Triggering as luminosity increases
    - Extrapolating jet energy scale across detector boundaries
    - Impossible to answer if you don't know the current status!!

- Too relaxed 1 on 1
  - Just because you are current interviewer is someone you know well from CDF - it doesn't mean you can relax and gossip - you have a job to do!
More Feedback

- Each 1 on 1 interview – have a game plan. What points do you want to make with that person no matter what? Make them!
- Dealing with your future plans
  - People very comfortable talking in detail about their next CDF measurement
  - Everyone wants to discover the Higgs at CMS or ATLAS
  - Very little meat in between on how you build a group and position it so that it is ready for the higgs discovery
- Lack of familiarity with LHC
  - How many magnets are installed - how many do they install/day and thus when will they be finished?
  - What is the schedule
  - What are the strengths of CMS and Atlas detectors
  - What are US groups doing on each expt?
  - Read the physics TDR’s.
  - Come up with a game plan on how you and your group will get plugged in and making a difference?
  - Will you utilize the LPC?
Final Feedback

- Read the job advertisement and know what they are looking for.
  - IF it is a CMS job - don’t have a plan on doing CDF physics for the next 4 years
  - OK to say that you are concerned about tenure and want to do X - but if it says CMS or ATLAS full time, they mean it!
Dealing With Rejection

- Getting a job means solving a complicated puzzle.
- Once you make the short list, they are very interested. From that point on - it’s a “beauty contest”
- Departments are trying to evaluate whether you are a good “fit” or match
- Don’t take things too personally
- Remember, you WANT your colleagues to get jobs too - otherwise it will be pretty lonely

- ASK yourself the following question
  - “Am I doing the right things to be a good fit somewhere....?” If not - CHANGE!