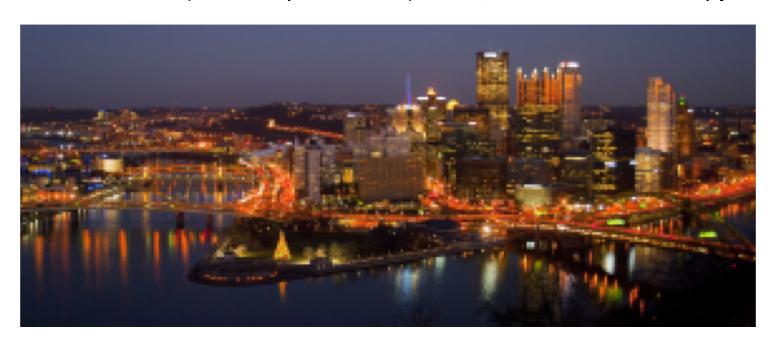# Forum on Career Development

PHENO 2018

Sally Dawson (BNL): Part 1, How to land a post-doc job

Keith R. Dienes (University of Arizona): Part2, How to land a faculty job

How to pick a research topic

- Most important: you should be interested in the topic
  - You will be spending a lot of time on it
- Your advisor (mentor figure) should think the topic is interesting
- Get in the habit of skimming the arXiv to see what topics people are working on
  - If absolutely no one is working in a general area, you should think carefully before jumping in
- Should you pick a research topic by looking at the rumor page to see where the jobs are?
  - NO, NO, NO

Are you ready for a post-doc?

- If you don't have at least 2-3 papers in refereed journals, the odds of obtaining a good post-doc position are slim
- You should have given a few talks outside your institution
  - **Talks are important**
    - Many places to give contributed talks (PHENO, APS April Meeting, DPF, smaller workshops). Send email to organizers if in doubt (as early as possible)
    - Often there are funds for graduate students and post-docs. Don't be shy about asking
  - Talks give you exposure to senior physicists (take advantage of this!)
  - **Make sure your talk has a simple and clear point**
    - **All those details get lost in a short talk!**
    - **Tell me why I should care about your results**
- There are many interesting jobs outside academic research....

The Application

- Jobs are advertised in AJO
- Many jobs advertised via email to senior physicists
  - Ask senior people to forward ads to you
- Check lab web pages for information
- Many prestigious places [CERN, Miller, Pappalardo, PCTS, Junior Fellows…] have very early deadlines
- Don't waste people's time by applying places you wouldn't go under any circumstances
- No matter what the ad says, have your application complete by Thanksgiving
  - Groups start reviewing applications in early December

The Application

- Cover letter
  - SHORT
  - Should contain 1 or 2 sentences describing the area you are working in
  - Should list your current institution, your advisor's (or mentor's) name, expected graduation date (or when your current post-doc ends), and names of letter writers

    Each year I read around 200 applications. Don't waste words on things that don't matter (like the cover letter)

The Application

- CV should contain
  - Your professional address and email, citizenship
  - Your academic history including undergraduate degrees
  - List any relevant employment, military service, or other reasons why there are gaps in your academic time line
  - List relevant summer jobs
  - Talks given outside your institution (Title of talk, title of conference or occasion for talk, date, place)
  - Activities that show your involvement in your department
    - I want to know that you will be involved with our group if I hire you!
  - Optional: Computer languages, languages spoken, conferences attended, teaching experience

  Remember: don't waste words

The Application

- List of letter writers and their contact information (include email)
- You need 3 letters
  - For graduating students, it is sometimes difficult to find 3 letter writers if you are in a small place
  - Think ahead– talk about physics with member of your department, find occasions to explain what you are working on
  - If I know the letter writer, I take it more seriously
    - Interact thoughtfully at meetings like PHENO, TASI
  - Go to seminars, colloquium, and interact
    - I look for people who "make things happen"

  For me, the letters are the most important part of the application

The Application

- Publication list
  - Include titles and co-authors (for theorists)
  - Experimentalists should pull out papers they contributed to and include a brief description of their contributions
- It's ok to include work in progress with expected completion date
- Research statement
  - NO MORE THAN 3 PAGES!!!
  - Explain what you have done and your general plans for the future clearly
    - Avoid jargon and buzzwords (I may not be working in exactly your area)
  - You need to catch my interest in the first paragraph (before I go on to the next 200 applications!)

EVERYONE SHOULD HAVE THEIR APPLICATION PROOFREAD BY SOMEONE WITH OUTSTANDING ENGLISH LANGUAGE SKILLS!!

No silver bullet, but…

- Talks and letters are critical
- Give letter writers evidence that you participate in the life of the department
- Keep your application brief and to the point
- Make it easy on the letter reader—double space, reasonable sized fonts, bullets, short paragraphs…