

CYNTHIA RUSH FOR THE LEARNING THEORY ALLIANCE, AUGUST 4, 2021

“HOW TO” APPLYING FOR ACADEMIC JOBS

Conference on Learning Theory, 2021

A BIT ABOUT ME

[COLUMBIA.EDU/~CGR2130](https://columbia.edu/~CGR2130)

- **BS in Mathematics:** May, 2010, UNC Chapel Hill
- **PhD in Statistics:** May, 2016, Yale University
- **Academic Job Search:** 2015-2016
- **Howard Levene Assistant Professor:** July, 2016, Columbia University



WHAT WE WILL AND WON'T COVER TODAY

We're going to cover every part of the academic job search EXCEPT research statement, teaching statement, CV prep, etc.

I will focus mainly on academic jobs for which research is a large component. There's are tons of good opportunities at liberal arts colleges, as lecturers, in industry, etc. that I won't really cover.

I have most experience with math & stats departments at US institutions. I tried not to encode my own biases in this talk, but unfortunately some will inevitably slip through.

OUTLINE

(1) Before applying

- Giving talks & Networking
- Finding Job Postings
- Organizing Letter Writers

(2) During the Application Process

- Building a Professional Website
- Managing Time Effectively
- Keeping Spirits High

(3) At the Interview

- Knowing What to Expect
- Nailing the Job Talk
- Evaluating the Department

(4) After the Offer

- Negotiating
- Moving to a New Place

WARNING



While most of what I will say is objectively good advice for folks looking for academic jobs... some of what is discussed will simply be my opinion on good practices or will hold true for most people but maybe not specifically for you.

Your best bet is always to talk to your advisor or supervisor or, otherwise, a mentor who knows you personally.

BEFORE APPLYING

- Finding Job Postings
- Organizing Letter Writers
- Giving Talks & Networking



FINDING JOB POSTINGS

Good places to start: academic society websites, department websites, your department admin.

Math and Statistics

- mathjobs.com
- academics.com
- ASA Jobweb
- ams.org/employment

Computer Science

- cra.org
- jobs.acm.org
- @csfacultyjobs (Twitter)
- Email lists like ml-news@googlegroups.com

Electrical & Computer Engineering

- IEEE Spectrum Magazin
- Society Websites (like ITSOC)
- higheredjobs.com
- jobs.ieee.org/jobs

In the US, jobs are typically posted in September-October with deadlines in November-December.

As you're looking, collect data somewhere...

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	A	B	C	D	E	F	
1	Institution	Job	Deadline	Link	Application eccentricities	Notes	
2	Columbia	Asst. Professor, Statistics	Dec. 15, 2021	http://stat.columbia.edu	Wants single .pdf, separate list of pubs	A+ location, great colleagues, weather is meh	

ORGANIZING LETTER WRITERS

- Talk to your advisor/supervisor ASAP about potential writers (at least 3)
- The writers should know you and your work well
- Request the reference a few months before it's due
- Send docs like the CV, research statement, whatever else... as early as possible
- When they agree to the reference, tell them you will remind them 2-3 weeks out from the first deadline (and do this)

Hi Ramya,

I hope you are having a pleasant summer in Wisconsin! I'm in Berlin right now, but will return back to New York next week before I head to Berkeley for the fall.

Anyways, I'm writing because my department would like to nominate me for a (*insert super prestigious name*) Research Fellowship. In short, the fellowship is a monetary award given every year to tenure-track scientists from US universities "in recognition of distinguished performance and a potential to make substantial contributions to their field". In order to apply, I need letters of support from other researchers who have the ability to speak objectively and knowledgeably about the quality and significance of my work and I was hoping that you would be willing to write one of these letters. It will be due September 16.

In case you are able to write a letter, and obviously, I would really appreciate it if you can, I have attached a CV, a one-page research statement, and a list of a few of the publications (and their abstracts) that I am most proud of, but I am happy to provide anything else that you think would make it easier for you.

Best,
Cindy

GIVING TALKS & NETWORKING

Beyond obvious preparations for the job search, like having significant research, one should practice giving research talks and do some networking

Your job talk shouldn't be the first time you give a research talk. Some ideas for opportunities to give talks:

- Conferences where you give a talk (not just a poster)
- In stats, some conferences (e.g. JSM) don't require you to publish in the proceedings
- Give research talks to your friends or organize a student seminar
- Invited talks are especially nice, since they go on your CV

Networking is important too! Talk to people at conferences you don't know: junior faculty, grad students from other schools, whoever...

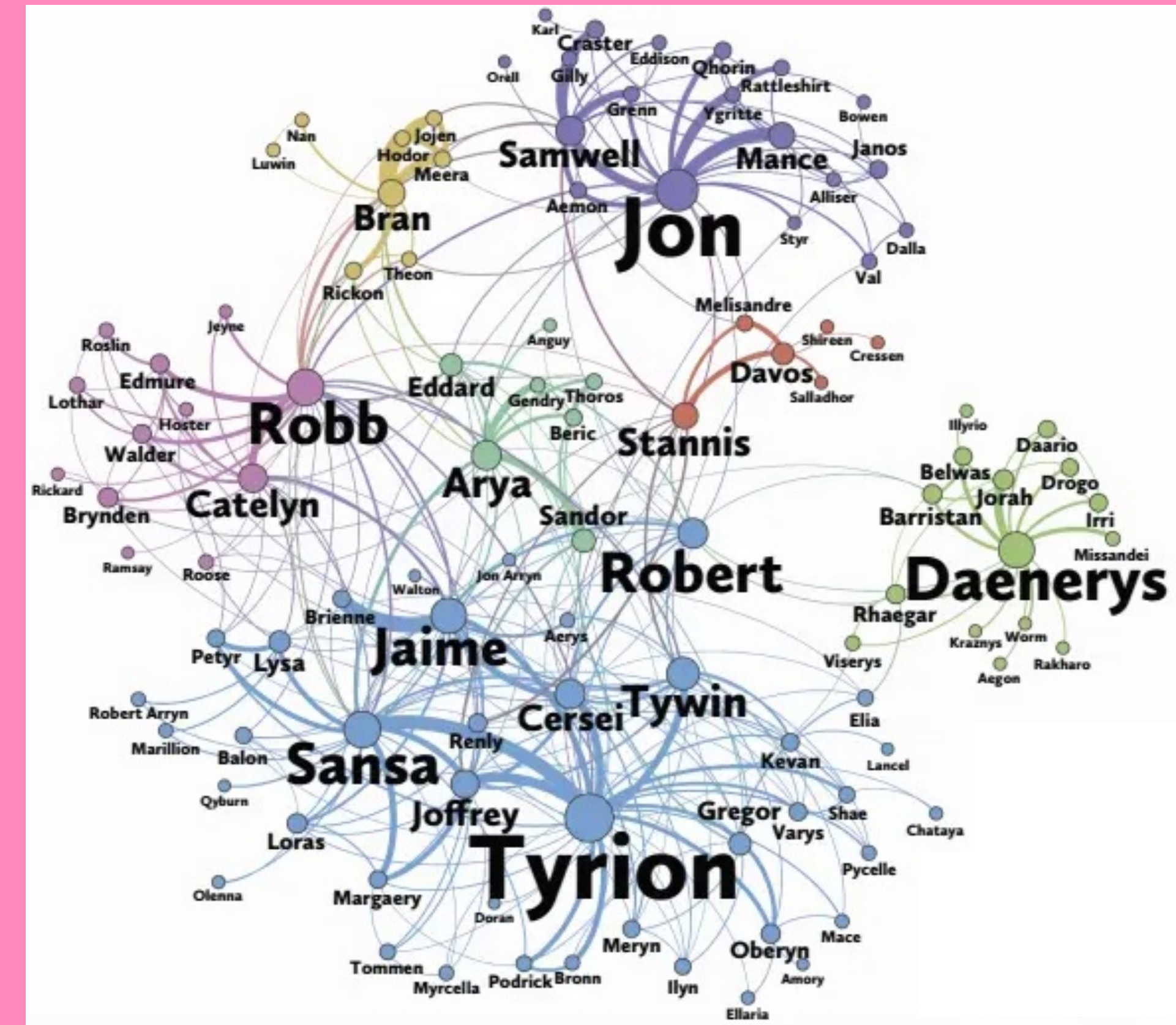


Image source: Andrew Beveridge and Jie Shan, “Network of Thrones,” Math Horizons, 2016.

DURING THE APPLICATION PROCESS

- Building a Professional Website
- Managing Time Effectively
- Keeping Spirits High

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BUILDING A PROFESSIONAL WEBSITE

- *If you haven't already, you should do this*
- It doesn't have to be much... a bit about you & some links to your work
- Some ideas
 - Google sites
 - Github pages
 - Hosted by your university (not really ideal if you'll be moving...)

Cynthia Rush

Assistant Professor, Columbia University Department of Statistics

- Home
- Publications
- Curriculum Vitae

Bio

My name is Cynthia Rush and I am the Howard Levene Assistant Professor of Statistics in the Department of Statistics at Columbia University. In May, 2016, I received my Ph.D. in Statistics from Yale University under the supervision of Andrew Barron and I completed my undergraduate coursework at the University of North Carolina at Chapel Hill where I obtained a B.S. in Mathematics.

My Research

My research uses tools and ideas from information theory, statistical physics, and applied probability as a framework for understanding modern, high-dimensional inference and estimation problems and complex

Contact



Ramya Korlakai Vinayak

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About Me

I am an assistant professor in the [ECE Department at University of Wisconsin-Madison](#).

My research broadly spans the areas of Machine Learning, Statistical Inference, and Crowdsourcing. My research vision is to develop theoretically grounded machine learning tools to make reliable inferences using data that comes from people.

Previously, I worked with [Prof. Sham Kakade](#) as a postdoctoral researcher in the [Paul G. Allen School of Computer Science and Engineering at University of Washington, Seattle](#) prior to joining

MANAGING TIME EFFECTIVELY

Remember that applying for jobs takes a lot of time and energy!

- Preparations should start around Aug. for deadlines in Nov., then interviews will occur Feb.-April.
- *Even after preparing statements & CVs, process of applying is time consuming:* often, each university has its own unique system where you essentially have to re-enter CV components individually.
- Interviews require lots of traveling and jumping between time zones. Consider the physical and mental toll this can take...
- Plan accordingly when it comes to things like writing your dissertation or otherwise meeting deadlines.

KEEPING SPIRITS HIGH

Rejections aren't a judgment of your personal worth and usually not even a judgment of your professional portfolio

- Hiring committees consider things like department fit, hiring priorities, and numerous other variables
- Many folks take a few stabs at the job market before they find a good fit

AT THE INTERVIEW

- Knowing What to Expect
- Nailing the Job Talk
- Evaluating the Department

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KNOWING WHAT TO EXPECT

Some departments may request a phone or Zoom interview first.

- Feel free to request info like how many people will be on the call, how long will it last, etc.
- This is a real interview, so take it seriously (***wear pants, do it in an office if you can, tape notes on your computer screen***).

Campus interviews usually last 1-2 days.

- Mostly back-to-back meetings with faculty for roughly 30 minutes each
- ***Have a few talking points in mind for each faculty member you will meet.*** Things like: your favorite papers they've written, common research interests, a talk you saw them give somewhere...

EXAMPLE Q'S FOR THE PRE-INTERVIEW:

Why are you interested in this job specifically?

Who will you collaborate with in the department? At the university?

What will you teach for the department?

What questions do you have for the search committee?

NAILING THE JOB TALK

For many faculty members in the hiring department, this is your first impression

Usually a 50 minute talk with 10-15 minutes of questions at the end

Needs to highlight *both your research so far & your future goals & plans*

Can be a bit pedagogical; teach people about your research area.

You want most faculty in the room to understand. Roughly:

- **15 mins:** general audience
- **15 mins:** folks with a PhD in your area
- **15 mins:** experts

The talk should be well-practiced and charisma helps

OTHER COMPONENTS OF THE CAMPUS INTERVIEW:

A meeting with PhD students.

Meetings with administrators.

Possibly a teaching demonstration.

Multiple meals with faculty and/or students.

EVALUATING THE DEPARTMENT

Also your chance to see if you could be successful in this department.

Signs the department is a productive, functional place:

- Strong job talk attendance
- Enthusiastic students & faculty
- Consideration of your personal needs

Some warning signs:

- No-show interviewers without explanation
- Disgruntled students or faculty
- Arguments or aggression during job talk Q&A

EXAMPLE Q'S TO ASK:

What is the tenure process like?

Have the past few tenure cases been successful?

What are the students like?

What kinds of jobs do they take after graduating?

What is the vision for the future of the department?

How does (my subfield) fit into that future?

Where does the department fit into the vision for the university?

How do the faculty interact with the university at large?

AFTER THE OFFER

- Negotiating (this is US specific)
- Moving to a New Place

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NEGOTIATING THE OFFER

ANOTHER WARNING: *THIS IS US-SPECIFIC ADVICE. I'VE HEARD NEGOTIATING OFFERS IS NOT COMMON IN OTHER COUNTRIES, BUT IT IS COMMON AND EXPECTED IN THE US.*

- At any point of the process, it's usually not in your best interest to push the department about timelines, *unless you already have another offer*. You kind of just have to wait it out.

Usually the department chair will tell you they intend to make you an offer before you actually receive a hard offer.

This is when you can start letting the department know what you need in the offer to be successful, i.e. you negotiate.

- Things like teaching releases, start-up packages, research funds, and/or moving expenses are the easiest to negotiate.
- You and the university both want your research to be as good as possible, so using this as a reason to ask for more in an offer is usually a good bet.

MOVING TO A NEW PLACE

After receiving an offer you can also ask to make a second visit. This can be a good chance to:

- Talk to folks you missed in the first visit
- See a bit more of the city/town including housing options
- Tour the university
- Meet your colleagues when you are not stressed or under the pressure of being evaluated.

SOME REFERENCES

- ***The Professor Is In***; <https://theprofessorisin.com/pearlsofwisdom/>. [General (non-ML) advice for applying for academic jobs.]
- ***The CRA Taulbee Survey***; <https://cra.org/resources/taulbee-survey/>. [Data on the state of the CS tenure-track job market.]
- Shomir Wilson's ***Guide for the Tenure-Track Job Market in Computer/Information Sciences***; https://shomir.net/tt_job_guide.html.
- Philip Guo's ***Reflections on my tenure-track assistant professor job search***; <https://math.duke.edu/sites/math.duke.edu/files/documents/guo-faculty-job-search.pdf>.