Searching for a (dream) faculty job

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Physics career seminar, 4/21/23

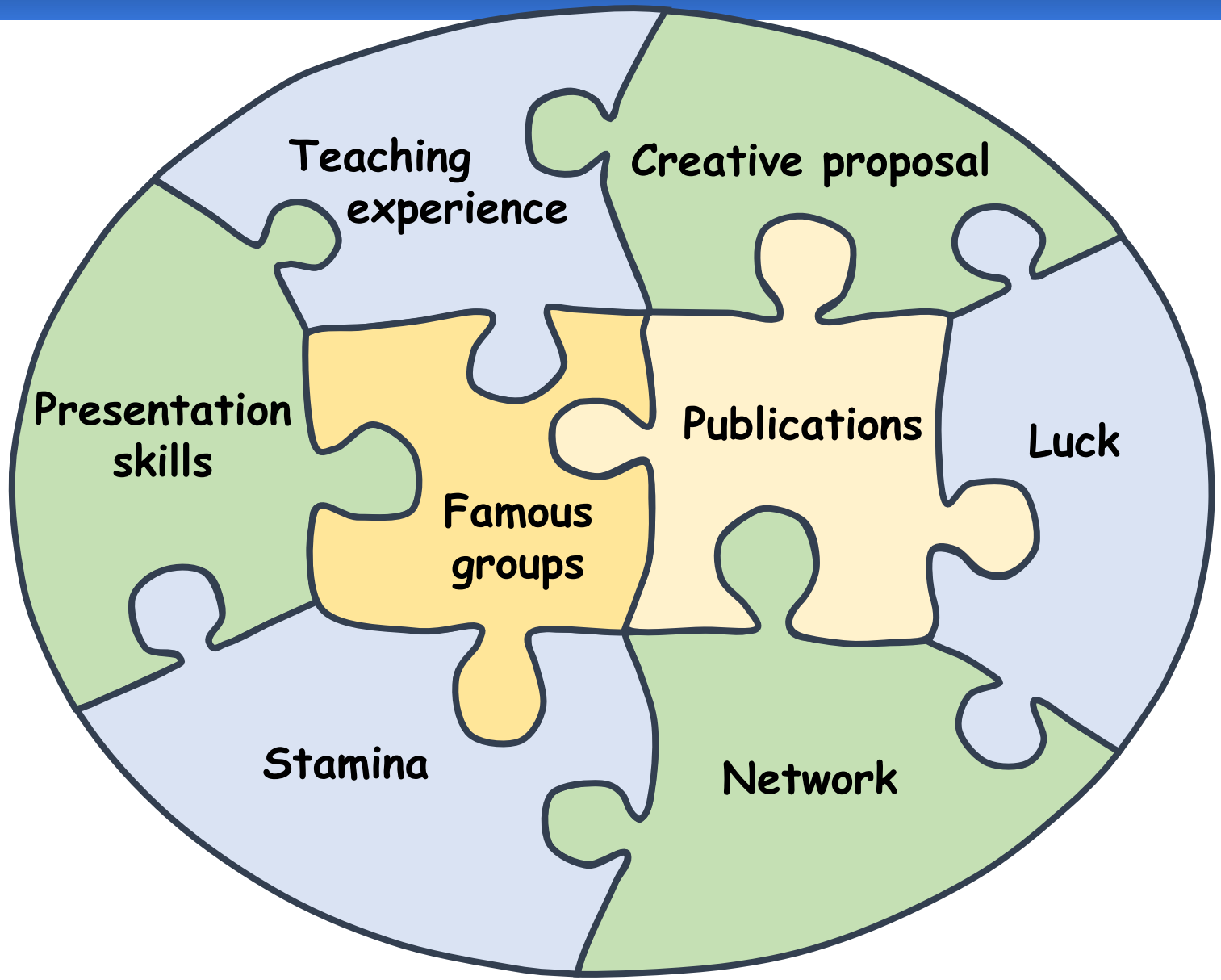
Background

- Undergrad in Moscow
- Masters at Fermilab
  - cryogenics, RF resonators
- PhD at IL
  - First group – didn't work out
  - Second group – Vidya Madhavan (cryo scanning tunneling microscopy (STM) , ultrahigh vacuum thin film growth, nanofab)
  - Two 1st author papers, a few co-author
- Postdoc at NIST - Joe Stroscio
  - Dil. fridge STM, devices
  - Atomic manipulation
  - One shared 1st author under review
- Faculty job?

Relevant preparation

- Alda Center leadership training program (getting better)
- Mavis Future Faculty Fellowship (going strong)
- iFEAT, training for future faculty (discontinued)
- Writing classes
- Mentoring (Lance, Advisers, other senior colleagues)

Recipe for landing a faculty job



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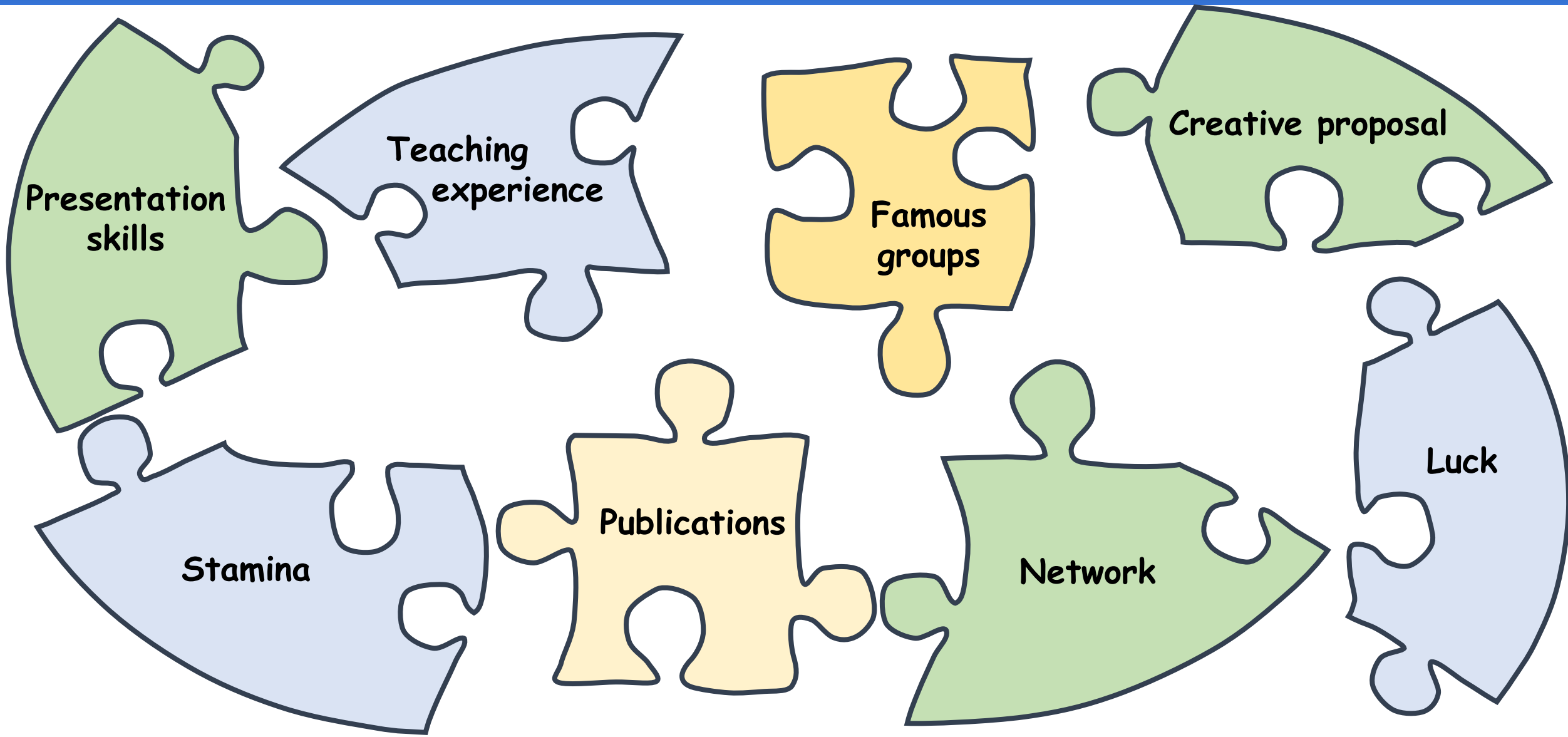
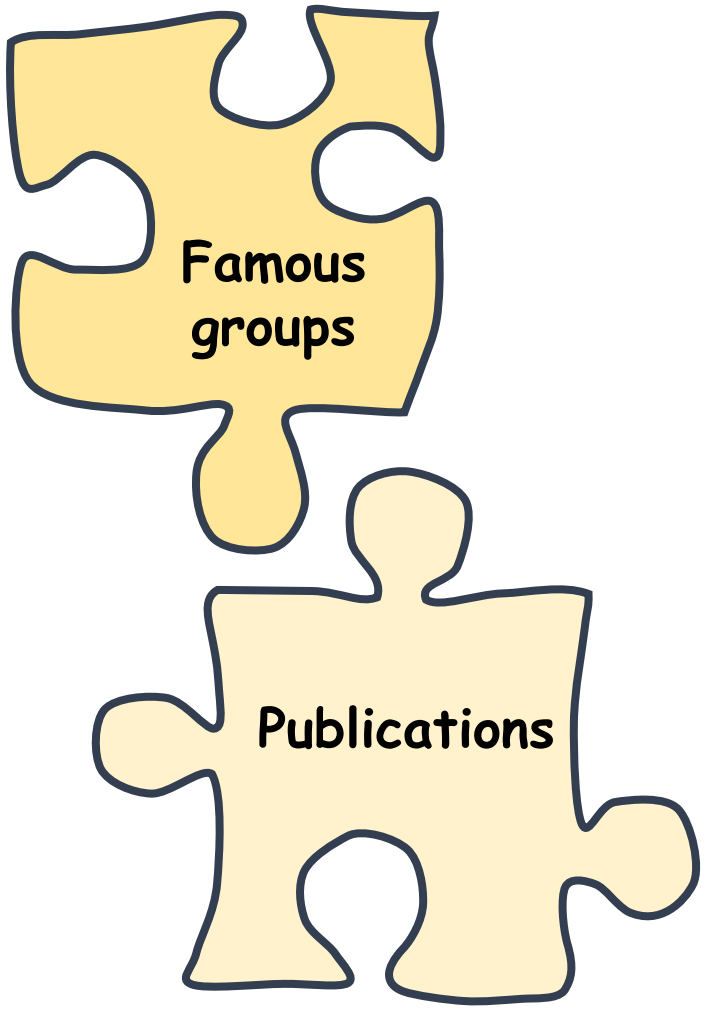


Priority #1



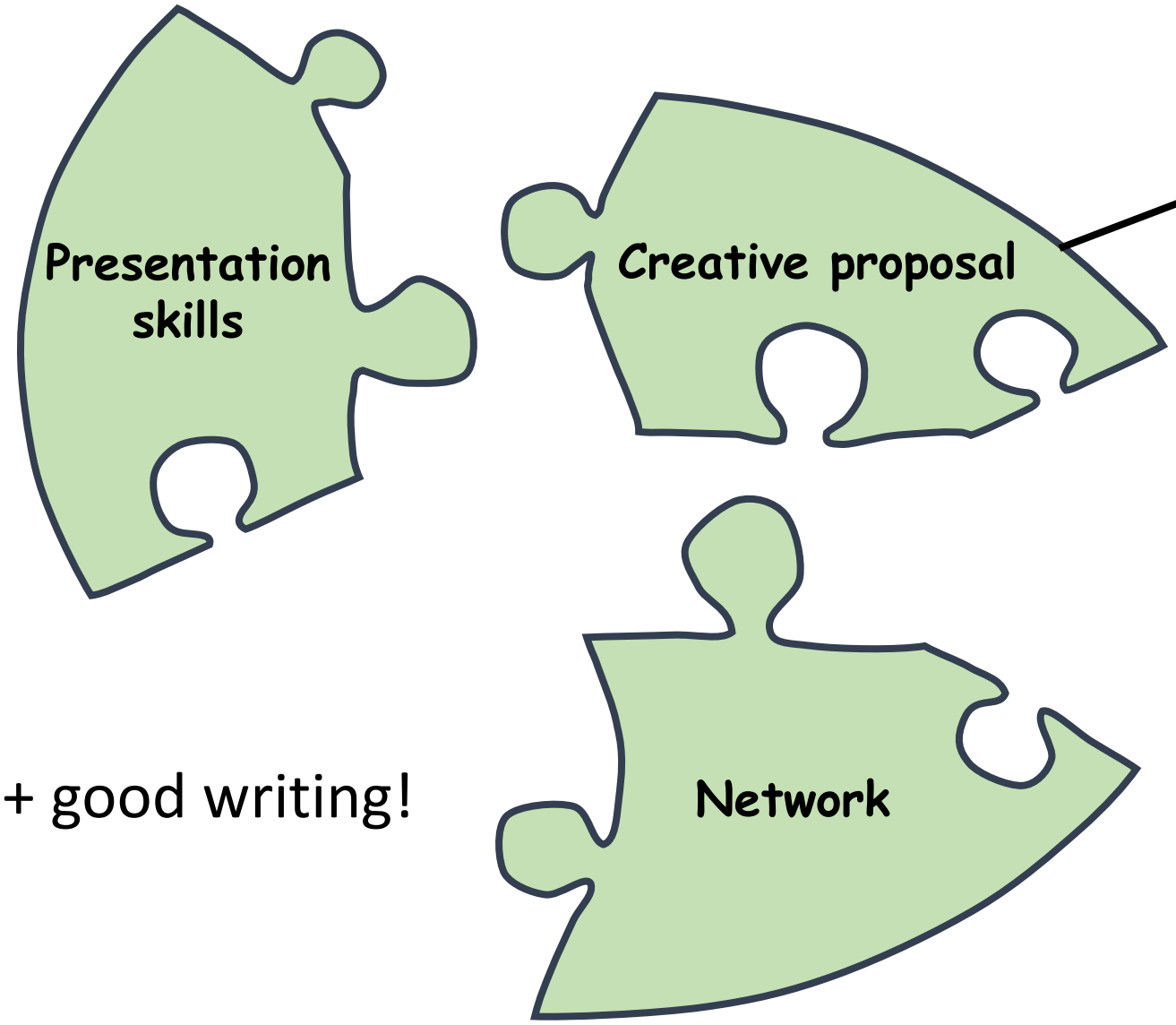
+ good rec. letters!

Based on the data provided by the American Institute of Physics (AIP) Statistical Research Center for the academic year 2020-2021, the 10 most common places that current tenure-track or tenured physics professors in PhD-granting universities in the US have their PhD degrees from are:

1. Massachusetts Institute of Technology (MIT)
2. University of California, Berkeley
3. Harvard University
4. California Institute of Technology (Caltech)
5. Princeton University
6. University of Chicago
7. Cornell University
8. Stanford University
9. University of Illinois at Urbana-Champaign
10. University of California, Santa Barbara

It's worth noting that this ranking may vary slightly from year to year and also depends on factors such as research specialties, demographics, and hiring trends.

Priority #2



+ good writing!

Name Research Statement/Proposal

Short intro

Project 1.

Blahblah

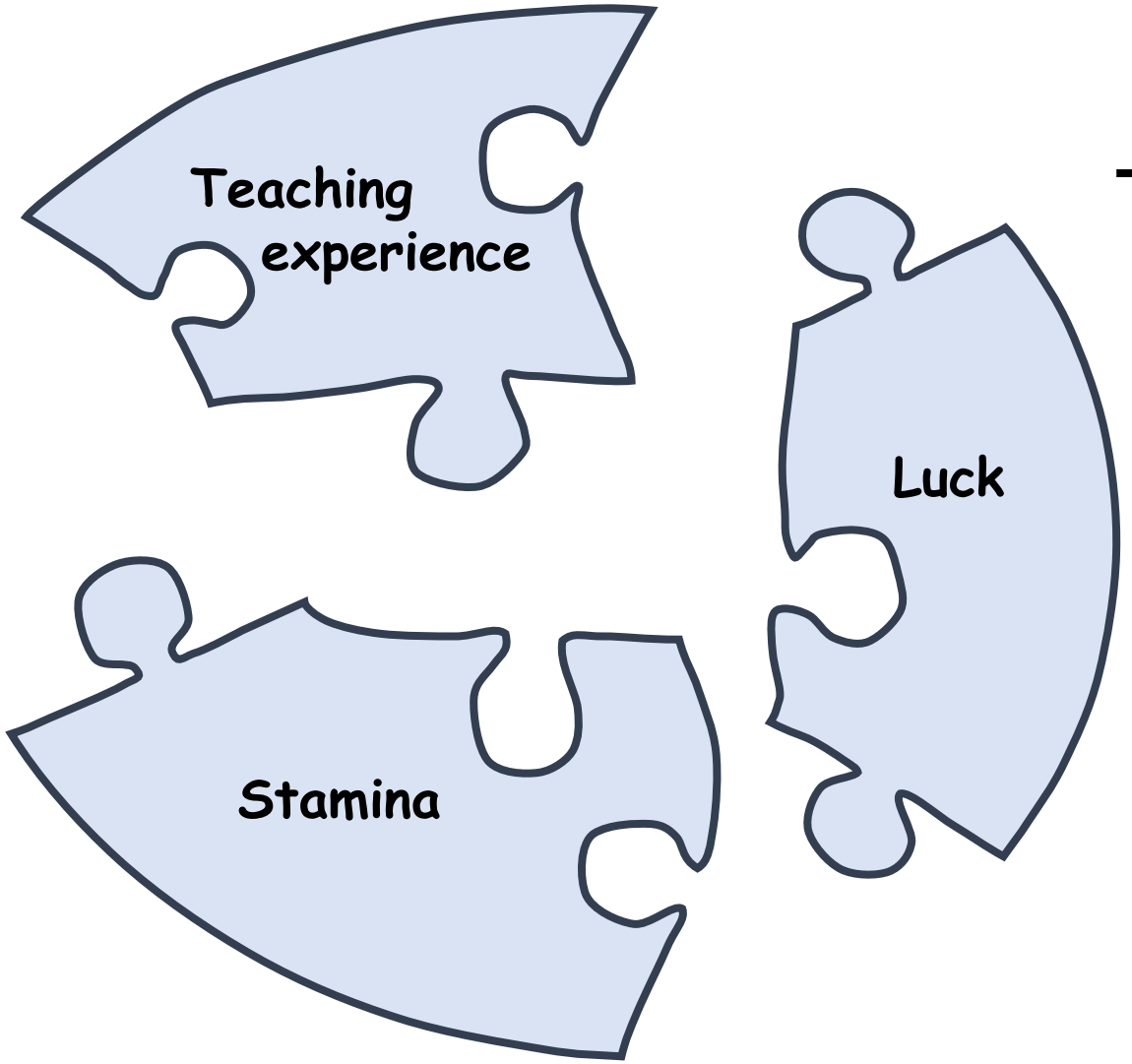
Project 2.

Blahblah

Project 3.

Blahblah

Priority #3



+ good fit!

Name Teaching statement

Describe how you approach teaching, what your main goals are, how do you improve, what motivates you in teaching, how you follow modern research and use it in your classroom.

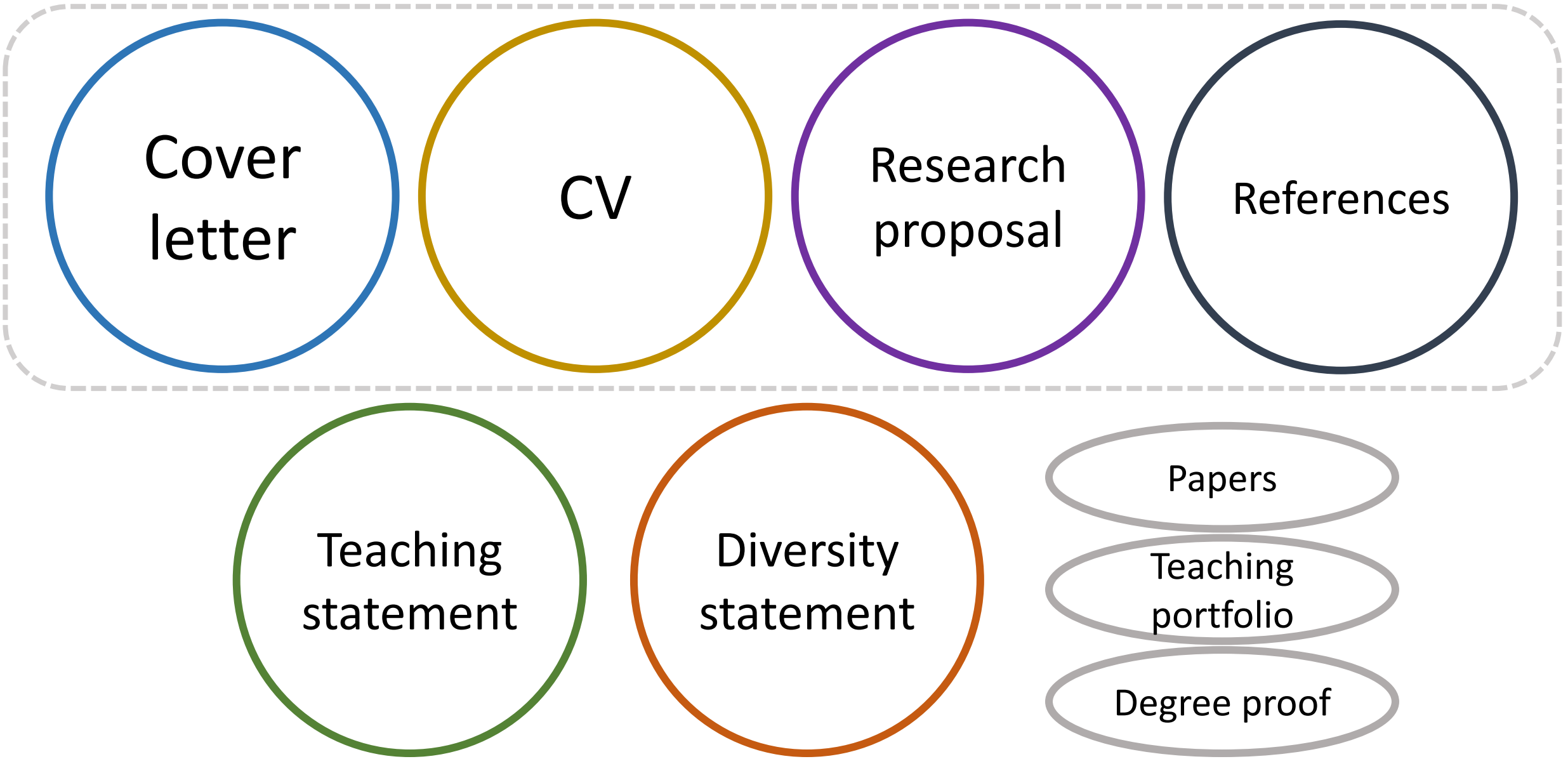
What to do now (as a student)

- Pick a good adviser! And impress them
- Do great research and write great papers in famous journal (alas)
- Network, network, network
- Work on writing and presentation skills
- Learn broader fields and search for inspiration
- Ask for advice from everyone you can think of
- Get leadership experience
- Get extra teaching experience beyond regular TA
- Make people like you
- Be lucky, or at least don’t be unlucky

Applying

Physics Today	https://jobs.physicstoday.org/
Higher Ed Jobs	https://www.higheredjobs.com/faculty/
Academic jobs online	https://academicjobsonline.org/
Indeed	https://www.indeed.com/jobs
LinkedIn	https://www.linkedin.com/
CM/AMO rumor mill	http://www.cmamorumors.org/

Application package



One data point ➡ Statistics!

45 applications →

15 online interviews →

12 in person invitations →

10 in person interviews
+ 1 interview without application →

5 offers + waiting from 3 more

Quick overview

- Strong sides: references/groups, proposal/skills
- Weak sides: no Nature/Science papers, expensive technique

- Outcomes: small schools/low-ranked schools, a few high-ranked schools for very concrete reasons

More questions?

Email me anytime! joulem@gmail.com

Thank you for your attention!