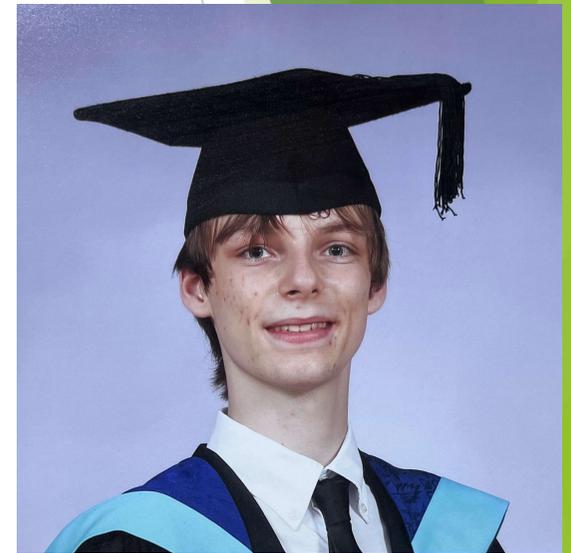


Post-Degree Probability: The Likelihood of Getting a Job

Dr. Lewis Napper
Foundational Scientific Software
Engineer (Met Office)

My Background

- ▶ Studied for an MMath degree at Surrey from 2017 - 2021.
- ▶ Graduated with 1st (hons) mid-pandemic into a very competitive job market.
- ▶ Applied for a handful of jobs and to study Part III, before being offered the opportunity undertake Ph.D.
“Geometric Techniques in PDE Theory, Fluid Dynamics, and Relativity”
- ▶ Provided temporary stability, income, and an interesting project.



Ph.D.s

- ▶ Specialist knowledge of a topic (most useful in academia).
- ▶ Independent working skills (Time management, writing, funding).
- ▶ Public speaking skills (Delivered 14 talks to academics/students).
- ▶ Travel opportunities
(Vienna, Tuebingen, Toronto, Cardiff, Oxford... visiting fellow in France).
- ▶ Opportunity to collaborate and take time to learn new things.
- ▶ Not especially high salary, but soft skills are useful for future career.

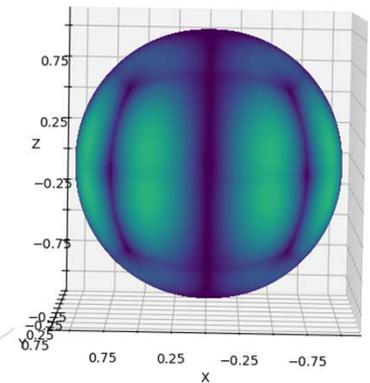
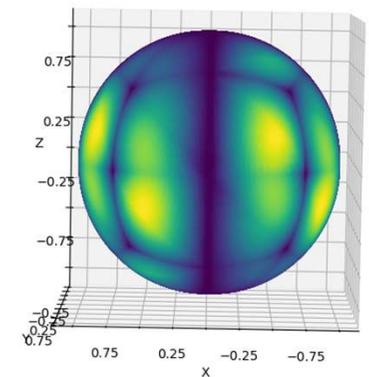


La Rochelle, France
CNRS Visiting Research Fellowship

Jobs

- ▶ Post Ph.D. back to applying for jobs.
- ▶ More income and longer-term stability than, say, postdocs.
- ▶ Less free time/flexibility.

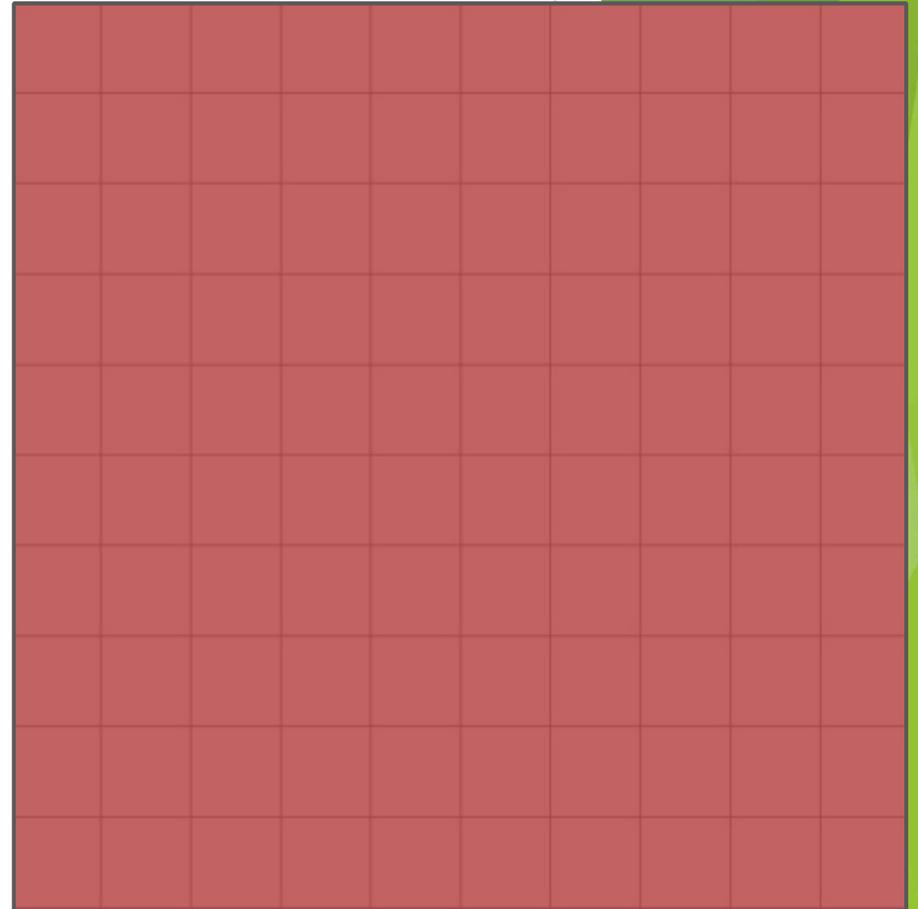
- ▶ Working at Met Office as Scientific Software Engineer.
- ▶ Nice mix of academic flexibility and research with routine of job.
- ▶ Get to apply some geometry knowledge (see image).
- ▶ Strong community and drive for learning.



Interpolating Functions on
Cubed Spheres

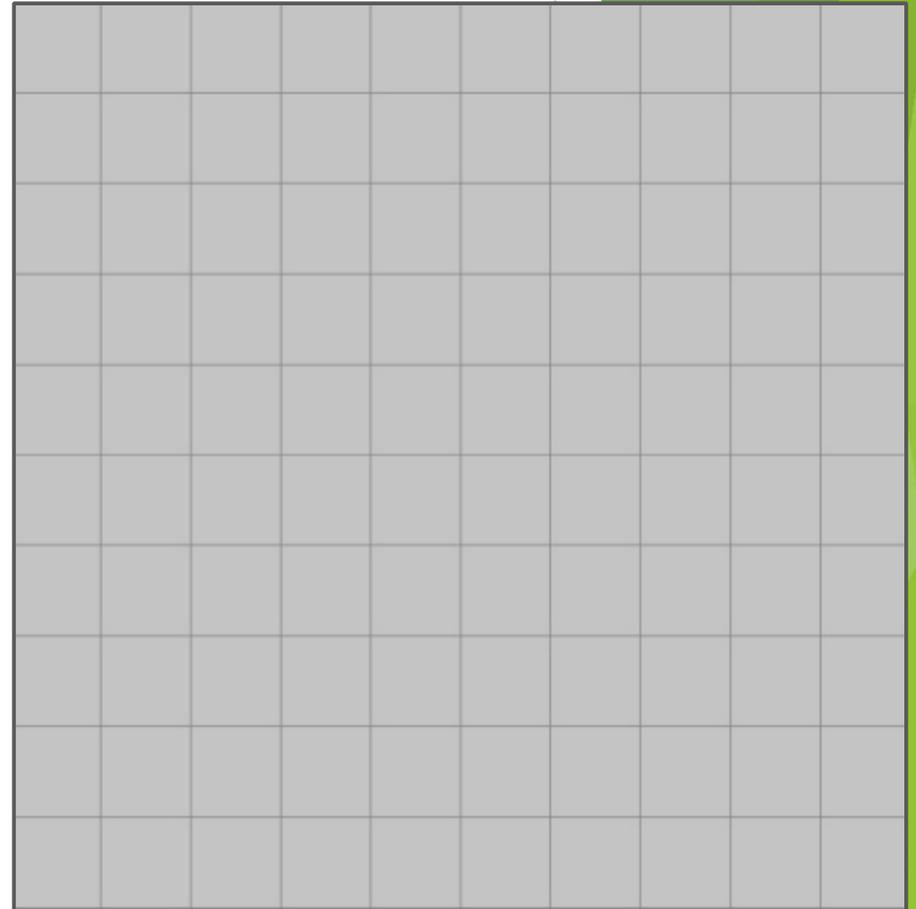
The Likelihood of Getting a Job

- ▶ Let's use maths to find out how difficult it is to get a job offer.
- ▶ Square represents a job application
Red represents proportion of applications which reach a given stage (credits: Bismuth)
- ▶ Given that you are applying for jobs, the probability you apply for a job you see must be 1... right?



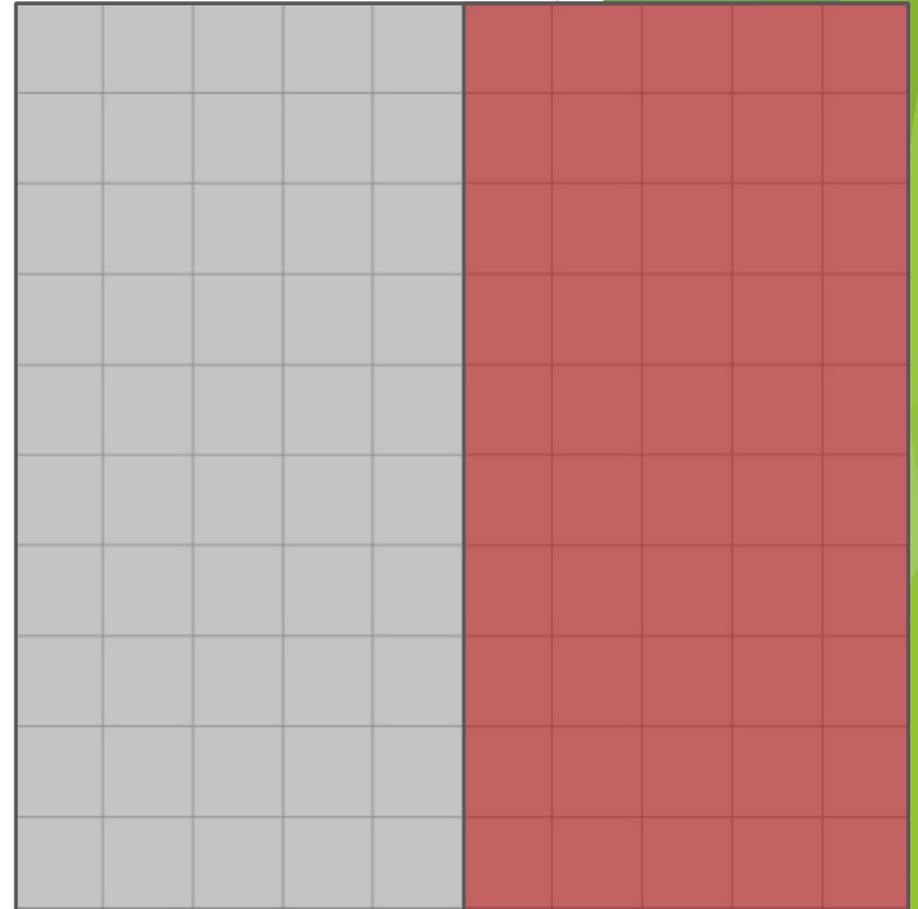
The Likelihood of Getting a Job

- ▶ Or maybe it looks more like this
- ▶ Post degree, you're going to be tired and need might a break.
- ▶ It's ok if your "probability of applying for a job" looks like this for a while.



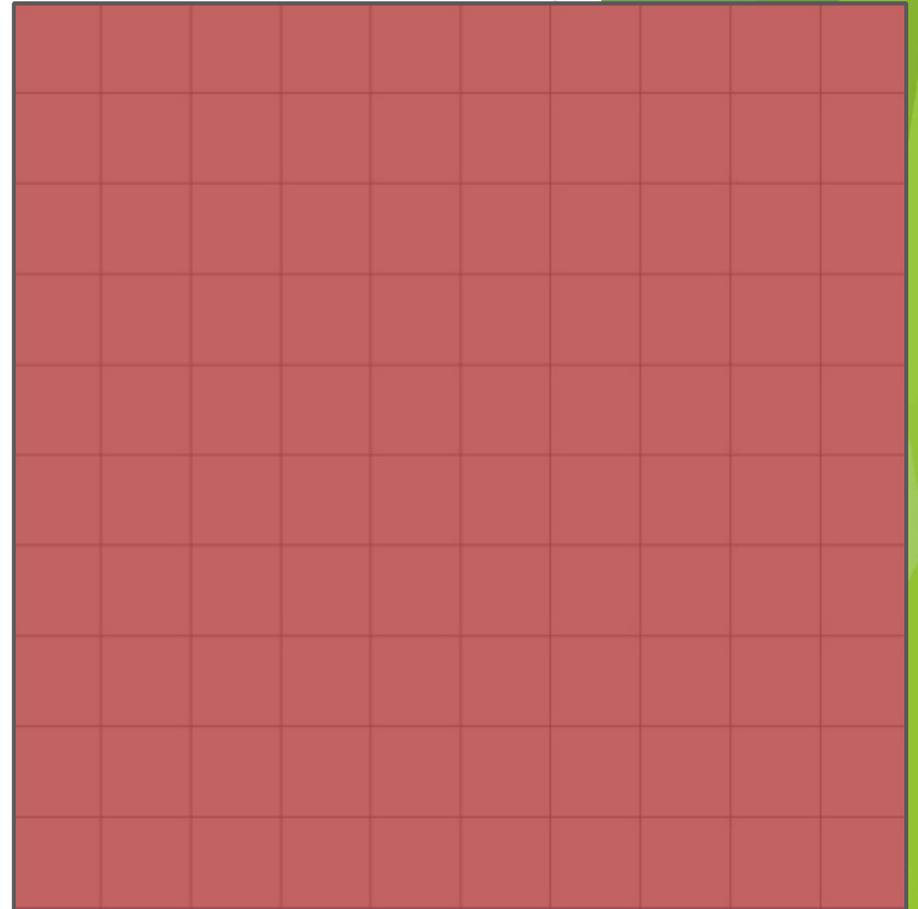
The Likelihood of Getting a Job

- ▶ More realistically, it'll look like this.
- ▶ You might not be confident/be too tired/miss the deadline/ life might get in the way.
- ▶ Tip: Be confident! Show off on your applications, apply even if you don't meet all the criteria.



The Likelihood of Getting a Job

- ▶ Assume for simplicity that if you see a job you'll apply for it.
- ▶ Tip: Have a target job in mind (location, salary, people, work-style) but be more flexible with applications (practice and opportunity are good).



Improving the Odds

- ▶ Probability of getting an offer from a single application is 2%, not getting an offer is 98%.
- ▶ Solution 1: Apply for more jobs
Binomial theorem - probability of no offers from n applications is $100 \times (0.98)^n \%$
e.g. for 10 applications, the probability of getting no offers is ~81%
so the probability of getting at least 1 offer is ~19%.
(35 applications for better than 50/50)
- ▶ Solution 2: Improve individual odds
Improve CV and interview skills (passively or actively)
e.g. chance of getting interview from 16% -> 25%, then overall odds 2% -> 3.1%
so odds after 10 applications from 19% -> 27%
(22 applications for better than 50/50)

Key Takeaways

- ▶ It will be difficult (but you can sway the odds)
- ▶ Have a dream job in mind (not all jobs are long-term)
- ▶ Academia and industry are both valid options (your career path doesn't have to be the "obvious" one)
- ▶ If nothing else...