

# Becoming a Scientist

From Burnley to Luxembourg via Geneva

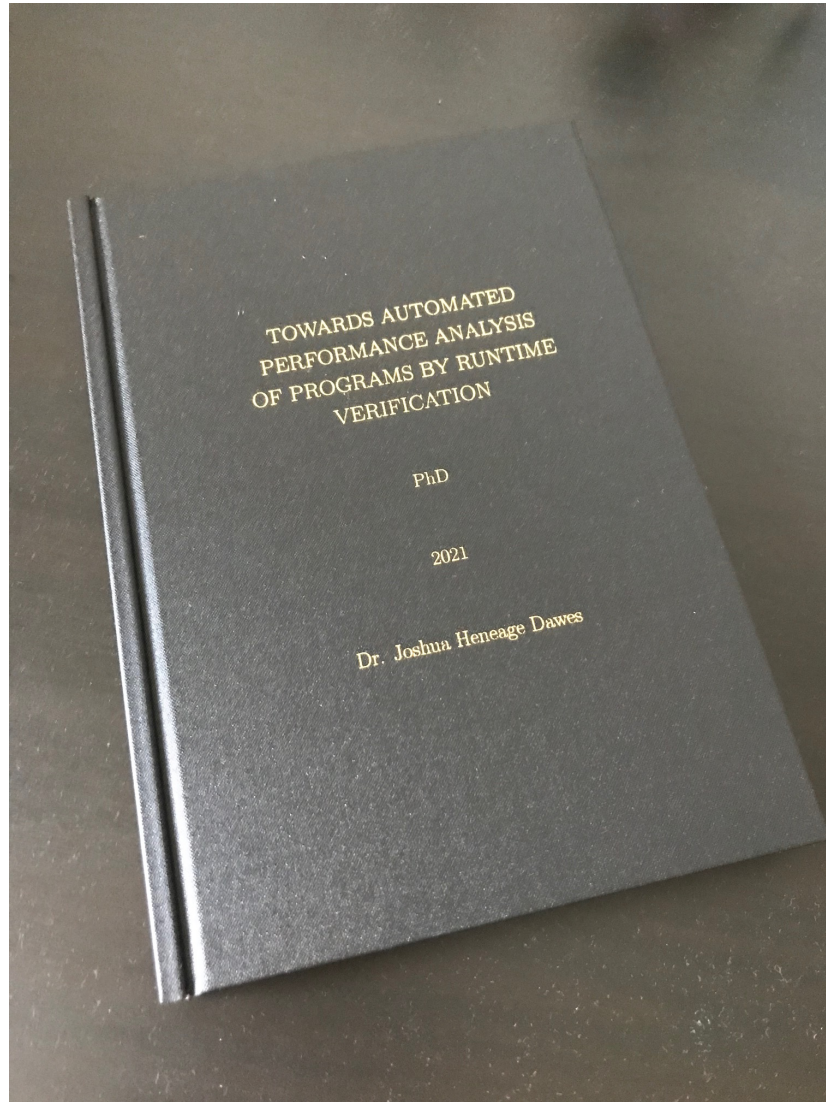
Dr Joshua Dawes

...or just Josh



# Introductions

- ▶ **A-Levels at Nelson and Colne College - finished in 2013**
- ▶ **Bachelors in Computer Science and Maths from Manchester, with a year at CERN - finished in 2017**
- ▶ **PhD in Computer Science from CERN & Manchester - finished in 2021**
- ▶ **Researcher at SnT in Luxembourg - present**



- ▶ My PhD introduced ways to mathematically analyse the behaviour of computer systems
- ▶ Three years of research at CERN
- ▶ Finished off with a three hour oral exam of my 230 page thesis

## Further back

- ▶ **Born in Burnley** - economically deprived
- ▶ **GCSEs at Shuttleworth College** - under government special measures for most of my time there
- ▶ **Free school meals**

## In other words...

- ▶ Not very likely to get a Bachelors degree
- ▶ Even less likely to get a PhD
- ▶ *Though these aren't the only ways of being successful!*

# My hope for this talk

That you realise that where you're born and how much money you have does not have to affect your chances in life...

...but you may still have a bumpy ride

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# Introductions *for social media*

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# Introductions *for real life*

- ▶ **A-Levels at Nelson and Colne College - finished in 2013**
  - ▶ Struggled for most of the 2 years
  - ▶ First exam results were Ds

# Introductions *for real life*

- ▶ **Bachelors in Computer Science and Maths from Manchester, with a year at CERN - finished in 2017**
  - ▶ Death of my mum after 2nd year
  - ▶ Final year was a train wreck
  - ▶ I'm proud that I not only got a first, but a high one

# Introductions *for real life*

- ▶ **PhD in Computer Science  
from CERN & Manchester -  
finished in 2021**
  - ▶ Still dealing with the loss of my mum
  - ▶ My PhD was harder than it needed to be



► Fast-forward one  
year

# Living in Luxembourg

Luxembourg is a tiny country between France, Belgium and Germany



# Working at SnT

- ▶ SnT is an organisation in Luxembourg that performs research in order to help companies around Europe
- ▶ **I lead a small team that performs research and develops tools to help people test their software**

## Best bits?

- ▶ Programming was my childhood hobby, and it's now part of my job
- ▶ I lead research that's based on my own research, so **I literally wrote the book on everything my team does**





## More best bits

- ▶ In non-COVID times, I get to travel the world to present research
- ▶ I work with people from all over the world
- ▶ I work at a multilingual university, so I speak English with some colleagues and French with others

## Worst bits?

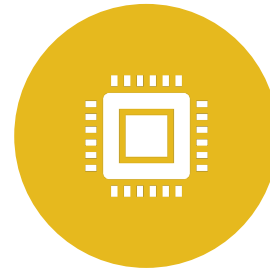
- ▶ My wife lives in England for the moment, so the dream of having our own place has to wait
- ▶ I miss British things...
  - ▶ Humour
  - ▶ Northerners
  - ▶ Food
  - ▶ Weather...?



▶ What skills do I  
need?



Maths (all sorts! Sets, functions, calculus...)



Programming/software engineering/algorithmic thinking



Writing for various audiences



Managing a few things at the same time

# Maths

- ▶ Problems pull in ideas from all over the place
- ▶ We can rarely think “yeah this is a calculus problem”...
- ▶ It's part of a scientist's job to decide which tools to use to solve the problem...
- ▶ ...or to develop new tools!



▶ How did I learn this stuff?



A-Levels and Bachelors degree



Programming was a hobby, so I learned to solve really hard problems for fun





► It's not all work

# Remember...



Work hard, **but have fun!**



Give yourself a break **often**



Working for 12 hours straight is generally not the best way to treat your brain

# A tiny bit of wisdom...

Now I'm at the grand old age of 27, I feel like I have the right to give "young people" advice

*If anyone asks you, you took advice from a doctor*

Achievement is only part of your life - the other part is your happiness, and the happiness of those you care about

And to conclude...

take your time





Questions?