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# Pursuing a career in HEP – a Personal Journey and Perspective

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# About me

- **Name:** Edith Zinhle Buthelezi
- **Residence:** Cape Town, South Africa
- **Highest degree:** Ph.D. Nuclear Physics
- **Collaboration:** ALICE Collaboration, active member since 2008
- **Current Position:** Team Leader, South African (ZA) ALICE cluster since September 2022 (3-year term)
- **Occupation/Employer:** Senior Research Scientist/Physicist, National Research Foundation (NRF) - iThemba Laboratory for Accelerator-Based Science (LABS), Somerset West, Western Cape, South Africa
- **Affiliation:** Honorary Associate Professor, School of Physics, University of Witwatersrand, Johannesburg, South Africa
- **The JOB:** Research topics: heavy flavour physics and electroweak bosons. I supervise MSc and PhD students and mentor Postdocs



**Career:** Started in experimental low-energy Nuclear Physics in 2000 and evolved with time to High Energy Physics (HEP) mainly the ALICE Collaboration at the CERN LHC since 2008 to date.

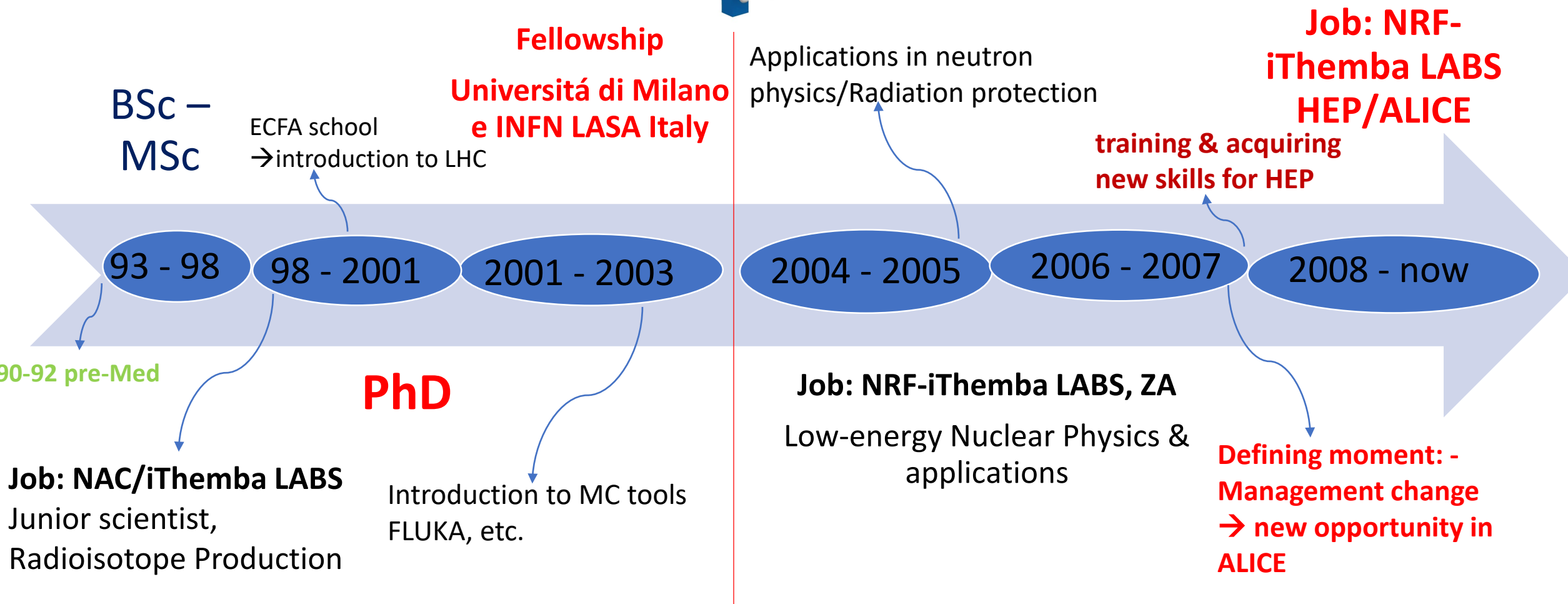
# Why am I here today?

Share my journey (experience and thoughts) leading to this point in my career; showcasing my personal journey from university as a student until my current position. Provide a new perspective on how to tackle the challenges lying between early career scientists and their future dream positions.



Perspective incorporates different viewpoints gathered from various people who are at different stages of their careers in HEP

# Career evolution



Hitting the wall - What next?

# Lessons learned - choosing a career path

## ❑ Recognizing the pivotal moment(s): Facing a dilemma - question time

- Am I satisfied with what I am doing?
  - do I feel intellectually challenged enough?
- What do I want to be?
- Where do you I see myself in 5-10 years' time?



## ❑ Making the Choice:

- WHICH path: Research, Academia, or Industry?
- Am I willing to make the CHANGE?

## ❑ Location/geography → where on the map do I want to be?

- access to resources

**Making a choice - considering all your needs**

# Lesson learned – pursuing the dream job

- How do I (re)invent myself?
  - Evaluate skills and competencies
  - Look at available jobs
  - Match skills to available job(s) of interest
  
- Do I need additional skills to assert myself in the ideal job/position?
  - What are the requirements?
  - Is training required and am I willing to go through it?
  
- Do I relocate? → how will this impact my life?



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**Bottom line: be willing to invest in yourself**

# Lesson learned - finding and maintaining motivation/inspiration



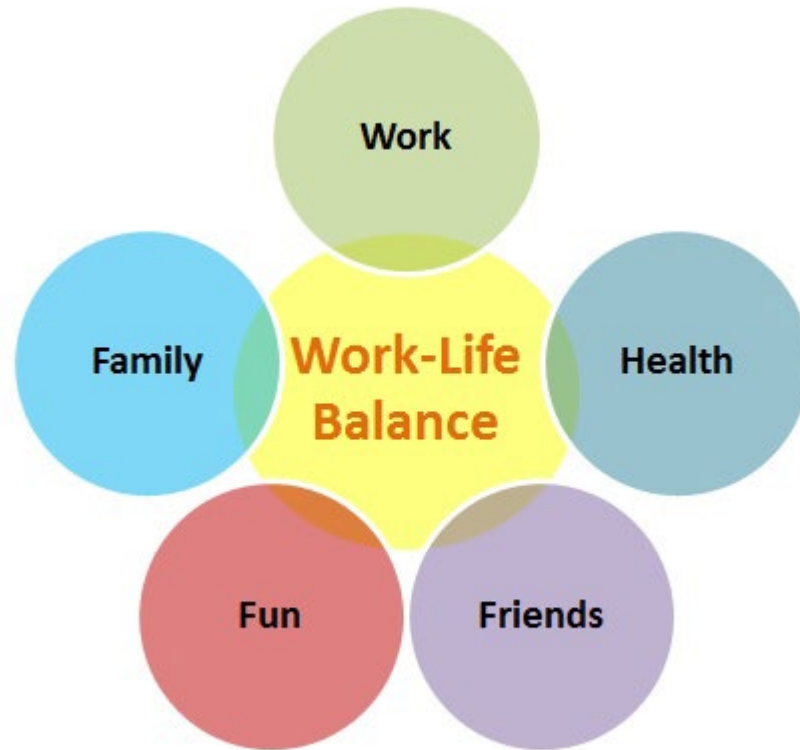
## Stuff happens!

- ✓ Job challenges.
- ✓ Dealing with life.
- ✓ Tackling the “elephant in the room” - the big “slump” nobody talks about!

- Job satisfaction requires the 3 Ps: **P**atience, **p**erseverance, and **p**ersistence
- Intellectual stimulation/challenge
- Professional support network
- Growth and development → acquiring complementary skills to move vertically/horizontally

# Lesson learned – learning the balance

- Understanding one's **ambition** and what **drives** them helps to define your idea of "success"  
→ What does a fulfilling (work) life mean to you?



- It doesn't have to follow the general norms → whatever works for you!



# Shifting the focus to YOU!



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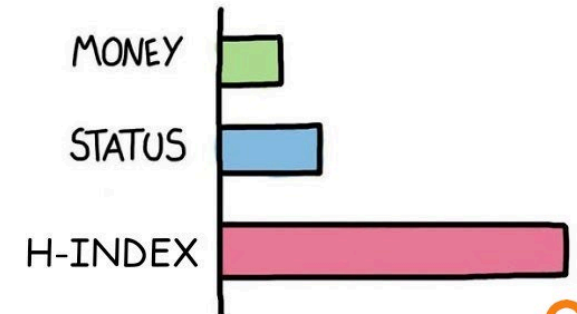
## What brings you here today?

# Are you pursuing a career in HEP or mulling over “why am I doing this”?

❑ Are you here because of

- scientific curiosity? Understanding nature? Willing to understand how things work? Or the unique opportunity to play with bigger things at grand scales?
- seeking an intellectual challenge? The joy of exercising your analytical skills?
- “Fake it till you make it”/Imposter syndrome? looking for status?
  - Are you trying to prove you are smart enough?
- being afraid to disappoint your supervisor?
- seeking or being part of a community of like-minded people?

## WHAT GIVES PEOPLE FEELINGS OF POWER



HIGH  
IMPACT  
PhD  
MEMES  
@iamnotanartist

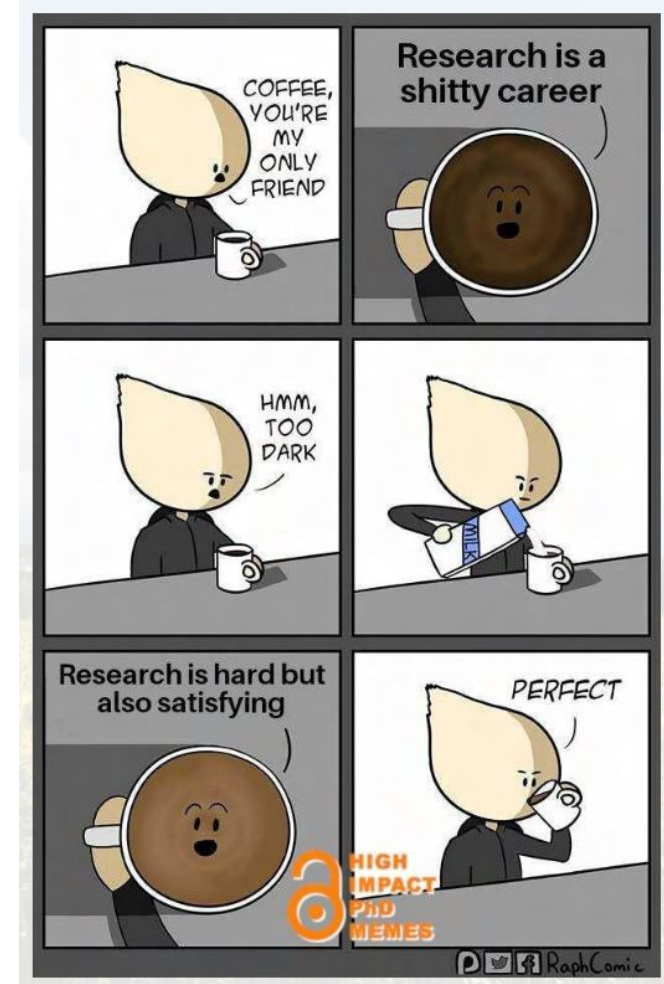
Whatever the reason and the answer, these questions will help you access what you are looking for and could guide you toward choosing a suitable career path for yourself

# The “elephant in the room” - Finding a job

## ❑ Setting up your professional profile and matching it to the “dream” job

- Do you want to be in Research/Academia or Industry
- What strength do you possess? Which of these profiles stands out for you?
  - ✓ Analytical skills (problem-solving, logical reasoning, critical thinking)
  - ✓ Knowledge of the research field (seeing the big picture, new ideas, and creativity)
  - ✓ Technical skills (attention to the finest detail where needed)
  - ✓ Management & organizational skills
  - ✓ Interpersonal skills, influencing & impacting the community
  - ✓ Communication skills... etc...
- Are you willing to learn other additional skills to fit the job profile?
- How about location/geography, does this play a role for you?

→ These will help you focus and narrow down your search



# Finding a job – The interview



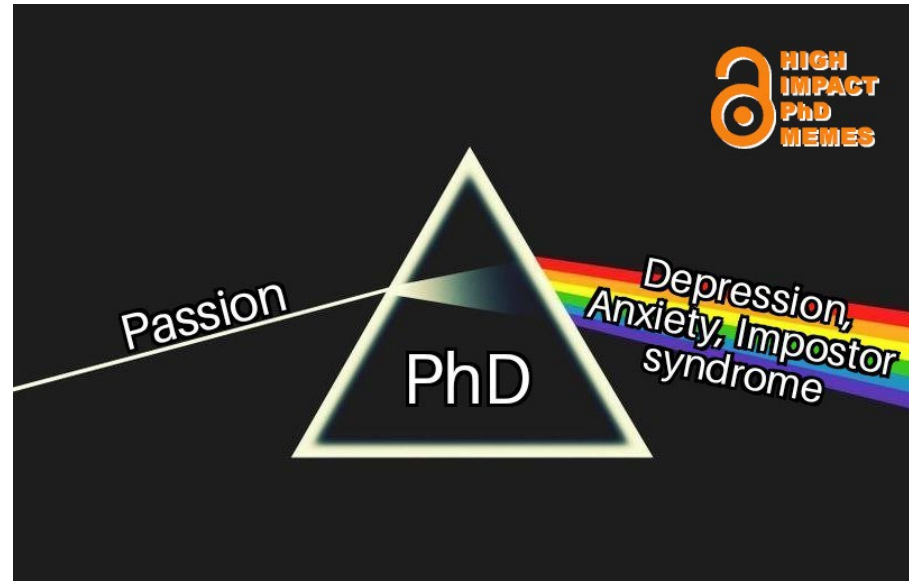
## ☐ Interviews can be multi-layered:

- first interview,
- short-list candidates → usually in person and could include a presentation (assigned topic) and/or task

## ☐ ARE YOU READY?

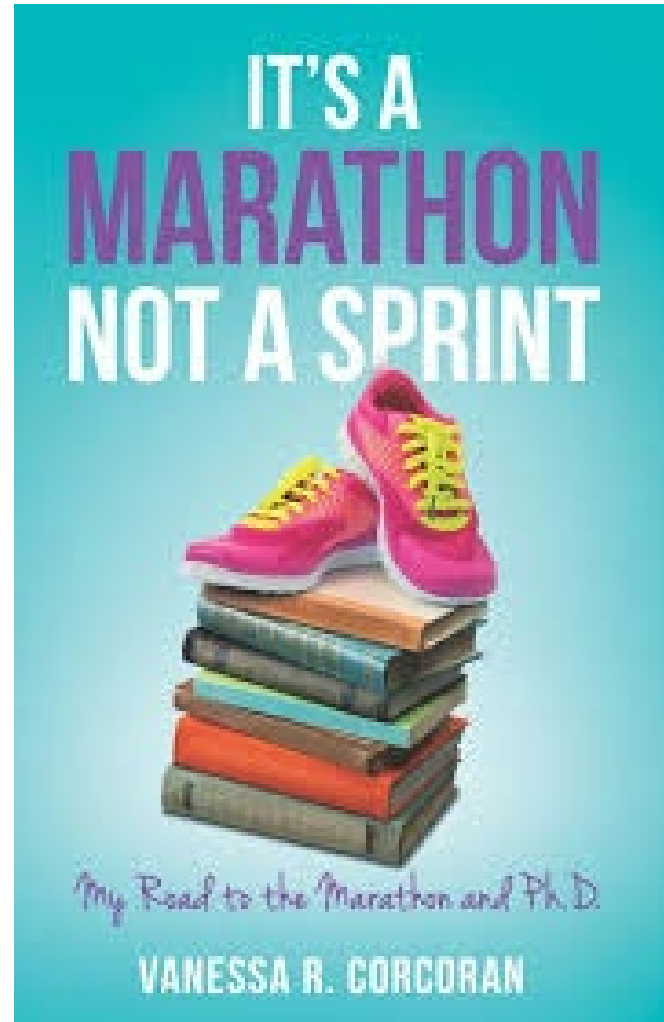
- Come prepared - take time to learn about the organization/company, consult if you must
- Dress code is important – dress appropriately
- Be ready to improvise
- Be open-minded
- Be natural – be yourself

# Facing the challenge – future and beyond



- Be open to change when things don't go according to plan
- Don't put all eggs in one basket! → select projects that will allow dynamic skills development
- Finish what you start → beware of “shocker” syndrome
- Create opportunities for yourself → take the initiative, and be proactive
- Establish support networks (professional, etc.) → backbone for surviving the “marathon”
- Don't “overdo” → be cognizant of burnout, and take great care of your mental health

Ph.D., Job, Life, and everything in between ...



**Best of luck....!!**