

Career Session

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JOHANNES GUTENBERG
UNIVERSITÄT MAINZ

As a PhD Student

Develop technical skills

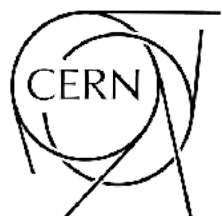
- Attend **lectures**, including on topics outside your immediate research area
- gain experience with as many **different research techniques** as possible
- follow best practices, especially when coding

Develop independence

- think about what **you** would like to do next; then discuss your ideas with others
- think of ways to cross-check your results yourself

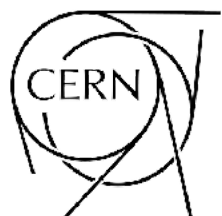
Choice of Topics

- stay tuned to the **interests of the wider community** (arXiv, social media, ...)
- what could be the “next big thing”
(new methods? new data? revisiting a problem that’s been dormant for a while?)
- try to become a leader, not a follower



As a PhD Student

- Soft skills**
 - Learn **presentation skills**
 - Learn **design / typography** skills for your papers and plots
- Build a professional network**
 - **interact** and if possible **collaborate** with researchers from other institutions
 - **ask questions** – seminar speaker will remember the people they interacted with most



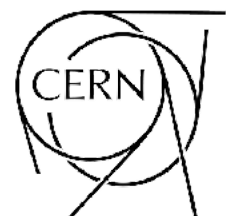
During Application Season

List of Publications

- should contain papers that demonstrate **broad technical skills**
- should show **creativity** (unexpected results, opening new research directions, ...)
- should show **independence** (a paper without your supervisor?)

Letters of Recommendation

- ideally from different institutions in different countries
(see above – professional network is crucial here)
- referees should know you well enough
- if you want referees to mention specific aspects they may not be aware of, tell them
(special skills? career breaks? etc.)



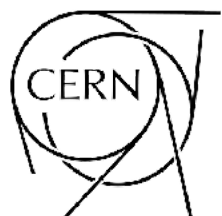
During Application Season

Research Statement

- brief overview of **what you've achieved**
- outline of **future directions**
 - show broad interests and clear view of a possible path forward that will allow you to acquire new skills and gain further independence
- keep it short (2 pages)

CV

- summarize your main **qualifications** and **distinctions**
- demonstrate what sets you apart from other applicants
- show that you're an **interesting person**
- explain any **special circumstances** that may have affected your career



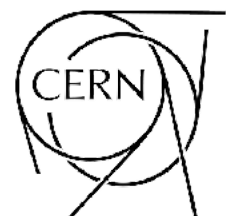
During Application Season

Potential hurdles / pitfalls

- people may not be familiar with the education system in India (letters of recommendation need to explain what your qualifications mean)
- in Europe / North America, groups receive a lot of unsolicited applications, especially from India and China – try to stand out
- when writing an unsolicited application, it needs to be specific to the group you're applying to
- “fashionable” topics differ between countries – demonstrate interest in topics your potential future employer is interested in (write a paper on the topic before application season? propose a concrete project?)

Dual Career, Childcare etc.

- can often be solved if you start thinking about it early enough



Applications for PhD Positions

Europe

- some structured PhD programs → follow the application procedure
- positions through individual researchers' grants → check Inspire; contact supervisor

North America

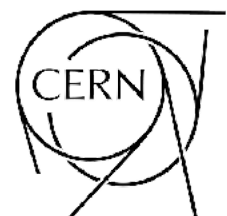
- only structured programs

What to include

- grades are important, but people may not know how to renormalise them
- show any work you have done (publication, report on research / reading project, ...)
- offer a video call

Get recommended if possible

- if you can, get a recommendation by someone your potential supervisor knows
- recommendations are particularly useful if they compare you to someone your future employer knows



As a Postdoc

Broaden your research

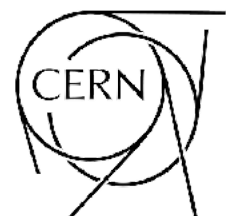
- work on new topics (ideally by starting collaborations with people from whom you can learn)
- acquire new skills
- be a leader, not a follower

Gain independence

- work without your PhD supervisor
- try to get projects started that were really **your** idea
- do some projects without more senior collaborators

Professional networking

- attend workshops, seminars, conferences as best you can
- form new collaborations
- work actively to disseminate your results
(get yourself invited for seminars, ask your mentors if they can advice you / arrange visits for you)



Best of Luck!

