EARLY-CAREER OPPORTUNITIES IN EUROPE

Panel discussion at the 15th International Workshop on the Physics of Excited Nucleons, Sevilla, Spain, September 6-11 2026

Karin Schönning

Uppsala University, Sweden

HADRON PHYSICS LANDSCAPE

European Experiments:

AMBER, ELSA, HADES, LHC (ALICE and LHCb), MAMI, MESA, PSI.

Global Experiments:

Belle II, BESIII, CLAS12, GluEX

Future Experiments:

ePIC, PANDA, CBM

Theory:

Lattice QCD, Functional Models, χPT, χEFT

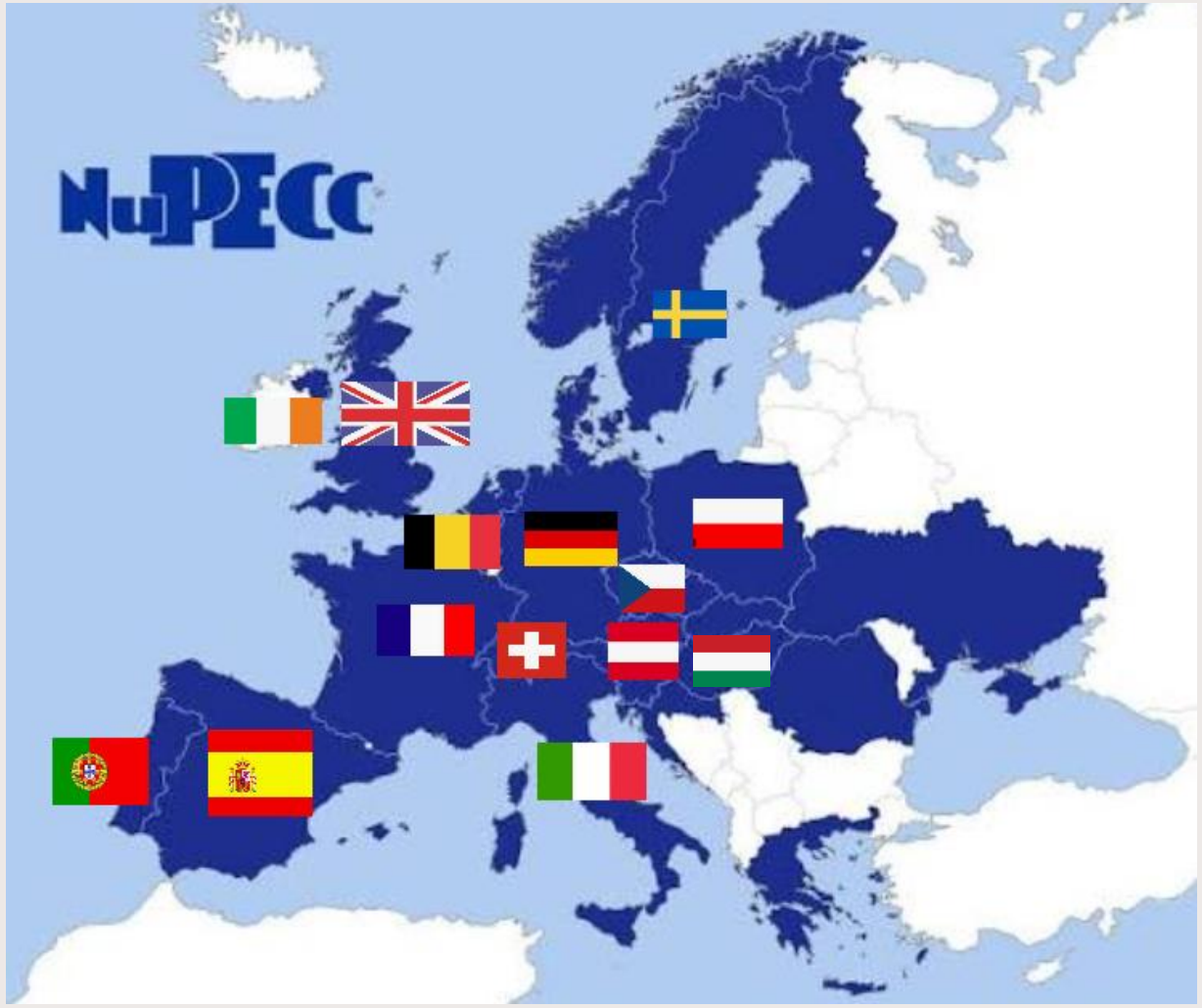
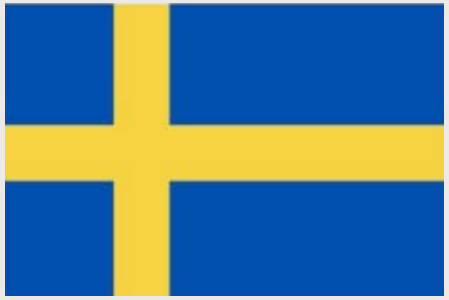
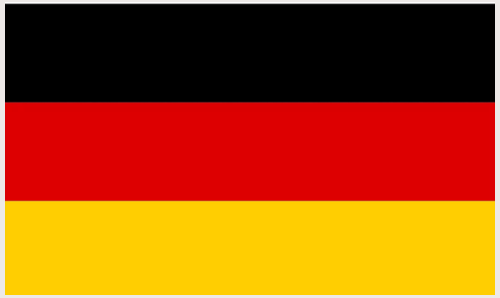
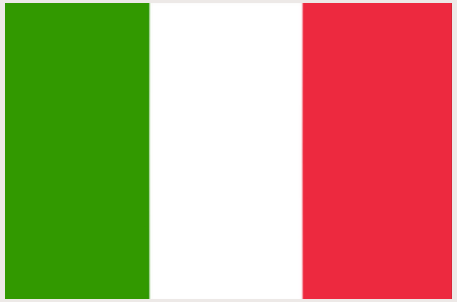


Figure adapted from the NuPECC LRP 2024
DISCLAIMER: May contain errors!

CAREER PATHWAYS







1-2 postdocs, starting < 3 y after PhD

Your own grant → Assistant Lecturer (tt, <7 y after PhD) → Docent → Lecturer (t) → Grants, supervised > 2 PhDs → Professor

Someone else's grant → Non-perm. res. (< 1 y)

Someone else's or your grant → Perm. res. → ERC → Lecturer (t)

Perm. res. → ? → Group leader's grant expires

~2 postdocs

Professor's funding → Non-perm. res. (< 6+6 y) → ?

Early-career grant → Perm.res.

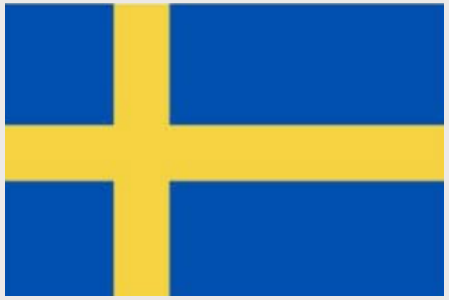
Habilitation → Lecturer (t) → Professor

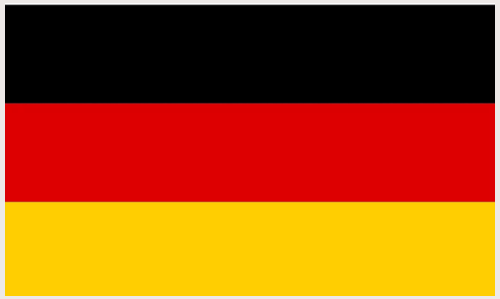
Postdocs / non-perm. res. <11 years

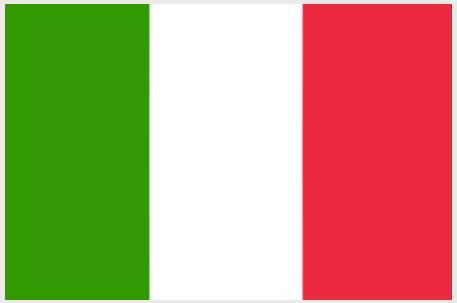
University → Assistant Lecturer (tt) → Lecturer (t) → Professor

INFN → Top-score at exam → Perm.res. / tt

CAREER PATHWAYS







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Professor

"Grant-oriented"

"Position-oriented"

OPPORTUNITIES

Sweden

- Possible to have a permanent research position with your own or someone else's funding.
- Multiple opportunities for grants for your own researcher's salary (Swedish research council and private foundations).
- Nationally funded tenure track positions from the **Swedish Research Council**, open for national and international applicants < 7 years after PhD → Offers a lot of scientific freedom for young scientists!
- Fast-track system in place for holders of large-scale grants from ERC and/or **Knut & Alice Wallenberg Foundation** to become lecturers if they fulfil teaching qualifications OR undergo training.

Germany

- **Emmy Noether** grant and **Helmholtz Young Investigator** Grant for early-career researchers to start their own research group → Evaluation after grant period ends, **almost always leads to a permanent research position.**
- "Traditional" system with **habilitation** leading to promotion exists, but it rarely used in recent years.

Italy

- Two complementary systems – universities and INFN – provides versatility.
  - INFN offers a large amount of research and scientific freedom.
- National grants like **BRIN** (for synergies between groups at different institutes) and **FYS** (large, like ERC) for single Pis.

CHALLENGES AND REALITIES

Sweden

- The position as permanent researcher has several problems:
  - If there is no funding left, even a ”permanent” employee may have to go (like in a private company, ”last in, first out”).
  - No clear path for promotion and restrictions on the possibilities for researchers to apply for their own funding.
- Strict migration policies is making Sweden unattractive for non – EU citizens.
- Small country, and few institutes are active in hadron physics.

Germany

- Inconsistent messages about postdocs: people are being told to go abroad to increase their chances, but then positions are not publicly announced and instead given to locals.
- Less money-flow to hadron physics compared to other fields lately.

Italy

- Recruitment processes are untransparent and happen irregularly and unpredictably.
- The calls for national grants also happen irregularly and often on short notice.
- INFN exams are extremely demanding, require a lot of working-time for preparation and do not necessarily reflect the qualifications for the job.

PERSONAL ADVICE TO ECR'S

- Make sure you and your supervisor can **connect your work** to the research landscape and its **over-arching questions.**
- Investigate the career paths in the country / countries you are interested in.
  - **Expectations?** International experience, work-life balance etc.
  - **Connections?** Try to find a "mentor".

- Many countries are "grant-oriented" and prioritise demonstrated academic leadership.
  - Learn how to **write good grant applications**.
  - Take on tasks with **"high promotability"** and be selective with **"academic housekeeping"**[1].

Define your own boundaries and decide what you are willing to sacrifice, and stick to this plan!

[1] Kalm, Sara. (2019). On academic housekeeping and its allocation. Sociologisk Forskning. **56**. 5-26 (2019).

PERSONAL ADVICE TO PI'S

- Offer **career consulting** and advice to your PhD students, postdocs and researchers!

  → Find balance between "service work" and original research.

- Help the ECRs to put their research project into a **context.**

- Time-limits for non-permanent positions are supposed to protect ECRs from being exploited, but are often used as an excuse to let people go

  → System should **allow non-time-limited positions** that, if necessary, can end in the same way as a "regular" (non-academic) job in agreement with local or national labour law and union agreements.

- Let's help each other with a **convincing, common scientific narrative**. How do we convince other physicists, funding agencies and politicians that hadron physics is just as exciting, valuable and worthy of funding as other fields in physics?

- You/we are the system! Contribute to foster a supporting, sustainable system for the coming generations.

Be the change you want to see!

Thanks to:

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