

1) “What is your field of specialization”

My primary research area is in accelerator science and advanced beam instrumentation. In addition, we are heavily involved in low energy antimatter research, data science and medical applications R&D. I also have extensive experience in coordinating large international collaborations, developing postgraduate researchers, and managing large-scale projects.

2) “I’m a new PhD candidate without professional experience (e.g., in data science). What advice do you have for someone in my situation?”

1. **Strengthen fundamentals:** Before diving into advanced research, make sure your foundational knowledge (core mathematics, relevant programming/data-science skills) is solid.
 2. **Get hands-on experience:** Seek out internships, part-time research assistant roles, or short-term projects in labs/groups aligned with your topic.
 3. **Collaborate early:** Engage with postdoctoral researchers and fellow PhD students in your department or at conferences. Learning from peers is invaluable.
 4. **Attend seminars and workshops:** These not only help you build technical skills but also expand your professional network.
 5. **Work on your communication skills and complete your ResearchComp competence assessment:** Being able to articulate your research questions and goals clearly, both in writing and in presentations, will accelerate your growth and visibility.
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3) “Are there positions that focus mainly on teaching (rather than research)?”

Yes. In the UK for example, these are often called Teaching Fellowships or Teaching-Focused Lectureships. They typically have a higher teaching load and less (or sometimes no) formal research requirement. Some universities also offer “Scholarship of Teaching and Learning” pathways, where you can focus on educational research rather than disciplinary research.

4) “I’m finishing a master’s in astrophysics and want to pursue a PhD in the same field. How can I get the opportunity to advance my career there?”

1. **Identify suitable groups:** Look at leading astrophysics groups worldwide (e.g., those publishing in your areas of interest). Most university websites list open PhD opportunities or upcoming funded positions.
2. **Check centralized listings:** Platforms such as [Euraxess](#) (for Europe), various university job portals, and specialized astronomy job boards (e.g., AAS Job Register) often list astrophysics openings.
3. **Contact potential supervisors:** If you find a professor whose research group aligns with your interests, send a concise email introducing yourself, your academic background, and why you want to join their group.

4. **Prepare a strong application:** Emphasize your relevant coursework, any internship or research project experience, and specific interests that match the group's work.
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5) "Is there a certificate of attendance or participation available for this seminar?"

No. ASP seminars typically do not provide attendance certificates. The session is intended purely as an informational and networking event.

6) "Where can we find the recording of the presentation?"

The seminar organizers (Dr. Mounia or the ASP team) will typically upload the recording on Indico or distribute it to participants via email if you registered. Please check the indico page in the near future.

7) "Some scholarship links require an application fee. How can we find free scholarships?"

- Most public/university-sponsored PhD postings in Europe do not charge any application fees (e.g., on Euraxess).
 - Always check official university websites. If you find a scholarship with a suspiciously high "application fee," verify its legitimacy by looking at the official domain of the funding agency or institution.
 - Government-funded or European Commission-funded PhDs (e.g., Erasmus Mundus, Marie Skłodowska-Curie Actions) typically do not charge you an application fee.
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8) "Are there any opportunities for people above 60?"

While some scholarships or specific early-career grants might have an upper age limit, many research and postdoc positions in Europe do not enforce strict age limitations. Research councils and universities are more concerned about your qualifications, track record, and fit with the project. So long as you have the relevant expertise and academic background, it is still possible to apply. This varies between countries, so please check the conditions carefully before applying.

9) "Are there specific opportunities for Moroccan PhD students to continue their postdoc in the EU? What are the main criteria?"

- **Marie Skłodowska-Curie Actions (MSCA):** Very popular EU-funded fellowships open to applicants worldwide (including Morocco).
- **National research councils:** Some EU countries have bilateral agreements with Morocco or special fellowship programs supporting mobility.

- **Criteria typically include:** A strong research proposal, a good track record of publications (relative to your career stage), alignment with the host institution's interests, and meeting mobility rules (e.g., not having lived in the host country for more than 12 months in the past 3 years for MSCA).
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10) "How can we get invitation letters from laboratories abroad? That's one of the big challenges when applying for funded scholarships."

1. **Identify relevant labs:** Look up academic publications to see who is active in your research niche.
 2. **Reach out directly:** Email group leaders, explaining your background, how it connects with their work, and that you're seeking to collaborate or visit.
 3. **Propose a clear collaboration idea:** Show that you have read their papers and can meaningfully contribute to or learn from their lab.
 4. **Be concise and professional:** If they see potential benefit, they are often happy to issue an invitation letter.
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11) "What are STFC and MSCA? Are they similar?"

- **STFC** (Science & Technology Facilities Council) is a UK-based funding agency that supports research in areas such as particle physics, nuclear physics, astronomy, and accelerator science. It funds studentships, fellowships, and large-scale research programs at national facilities. It also carries out research and employs researchers, so it is both a funder and a research organization.
 - **MSCA** (Marie Skłodowska-Curie Actions) are European Commission grants that support researchers at all stages of their careers, offering funding for PhDs, postdocs, and collaborative international projects.
 - **Similarity:** Both fund research and training programs, but STFC is UK-specific (though sometimes open to international collaborators) whereas MSCA is under the broader EU umbrella.
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12) "What is required for getting a postdoc in terms of publications? Is there a minimum number?"

No official, universal minimum number. Quality and relevance of publications matter much more than raw count. For competitive postdocs, especially in well-funded labs or top institutions, having at least a couple of solid peer-reviewed papers where you are a lead or key contributor is often expected. But it can vary widely by discipline and by the expectations of a given supervisor or funding call. You can also demonstrate research leadership in many different ways, not just through publications.

13) “What does a postdoctoral experience look like in terms of teaching (pedagogy) at a public or private university?”

Many postdocs focus primarily on research, but opportunities for teaching vary by institution. Some postdocs serve as teaching assistants or co-supervise undergraduate and master’s students. In certain cases (especially if you aim for a teaching-oriented career), you can negotiate or seek roles that explicitly include teaching responsibilities, mentoring, or educational research.

14) “If we apply for an advertised PhD position, can we still apply for extra funding?”

Yes. In many cases, the advertised PhD position might provide basic funding (stipend + tuition). But you can often apply separately for travel grants, conference support, or small-scale research grants that supplement your main funding. Check with the university’s graduate school office or major funding bodies in your field.

15) “I’m the only undergrad here; I’d like international exposure. Any advice?”

- Look for summer research placements or international internship programs (e.g., CERN’s summer student program, DAAD for Germany, MITACS in Canada).
 - Attend virtual conferences and workshops to start networking.
 - Volunteer for lab work at your home institution: any research experience will strengthen your résumé for future opportunities abroad.
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16) “What is the standard of success in research and for researchers?”

This can vary, but generally:

- High-quality publications in reputable, peer-reviewed journals.
- Conference presentations and active engagement with the community.
- Securing grants/funding to support projects.
- Impact and innovation—e.g., creating something that becomes widely used in the field, or addressing a real-world problem effectively.
- For collaborative projects, success is often measured by how well the team’s collective expertise comes together to advance the topic.

I gave a few more examples on my slides, so please have a look there as well.

17) “What are your top pieces of advice for someone in the first year of a PhD? What’s expected as results in the first year?”

1. Clarify your research question and goals: By the end of your first year, you should have a well-defined research direction and plan.

2. Literature review: You need to become an expert on the existing body of work in your niche.
 3. Develop key methodologies: Familiarize yourself with the instruments or software you'll need.
 4. Build your network: Interact with your research group, attend seminars, and reach out to fellow students. Research is rarely done in isolation – take ownership of your project and be in the driver's seat: A PhD is not an undergraduate project, you can (and should) shape the project, targets and pro-actively develop directions.
 5. Small steps are fine: Typically, your first-year achievements revolve around reading, planning experiments (or computational approaches), and possibly some preliminary data collection.
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18) “Many conferences require fees, visa expenses, etc. How can a student with limited funds participate?”

- Travel grants: Many scientific societies (IEEE, APS, IOP, etc.) and philanthropic organizations offer grants for conference travel. You will be pleased to hear that for IPAC'29 which I will chair in Liverpool, we have secured dedicated funding in support of researchers from Africa.
 - University support: Ask if your department or graduate school has discretionary travel funds for students.
 - Presenter waivers: If you're presenting a paper or poster, some conferences waive or reduce the registration fee.
 - Volunteer roles: Some conferences allow volunteering in exchange for waived fees.
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19) “I'm a PhD student in Ethiopia, looking for a postdoc. Any specific plans to support Ethiopian students?”

There aren't country-specific postdoc schemes that I personally run, but many global programs (e.g., Marie Skłodowska-Curie fellowships or DAAD in Germany) actively encourage applicants from all countries, including Ethiopia. Your best route is to:

1. Identify labs or professors whose research matches yours.
 2. Reach out to them directly and mention you're seeking a postdoc.
 3. Investigate broader scholarship portals like Euraxess (in Europe) for open calls.
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20) “I developed an educational simulation/app during my PhD. What are my postdoc options?”

1. Educational technology research: Look for postdocs that integrate computer science, pedagogy, and assessment of learning tools.
2. Pedagogy-focused postdocs: Some universities have education departments or teaching centers that hire postdocs to research digital learning methods.

3. **Disciplinary research:** If your app is relevant to your field (physics, engineering, etc.), you may seek a postdoc that further develops or validates that software in a research/education environment.
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21) “How to compute electron–phonon coupling using the DFTB+ method?”

This is very specialized and maybe not very much careers-related, but in broad terms:

- You need to ensure your DFTB+ setup (Slater–Koster files, parameters) is suitable for phonon calculations.
- Perform phonon dispersion calculations, then couple them with electronic structure.
- Check official DFTB+ documentation or relevant forums/papers for implementing electron–phonon coupling specifically.
- Collaborate with a theoretical solid-state group if possible, since advanced coupling calculations can get quite technical.

(If you need deeper technical detail, you’d likely want to consult an expert or the DFTB+ user community – I cannot be of too much help here!)

22) “What should we expect in interviews for grants or funding? How to prepare?”

1. **Research clarity:** Be ready to explain the “why” of your project—why it’s important and how it advances the state of the art.
 2. **Methodology details:** Show that you have a realistic plan (experimental or theoretical) to achieve your objectives.
 3. **Feasibility and impact:** Committees often look for feasibility within the proposed timeline and potential impact of your findings.
 4. **Know your CV:** Be prepared to discuss any publications, lab experience, or relevant skills.
 5. **Practice:** If you have a supervisor or mentor, schedule a mock interview to get feedback on your presentation style and preparedness.
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23) “I have a PhD in physics but feel pressured by academia (publishing, grants). Are there other options?”

Yes. With a PhD in physics, you are highly employable in:

- **Industry R&D:** Semiconductors, materials, photonics, aerospace, etc.
- **Data science and finance:** Quantitative analysis roles in banks, consultancies, insurance.
- **Government or policy:** Science policy, grant administration, regulatory bodies.
- **Education/outreach:** Scientific journalism, museum curation, educational technology startups.

Many physicists move successfully into non-academic roles leveraging their analytical skills.

24) “How to get international collaborations as a current PhD student?”

- **Attend conferences and workshops** (including virtual ones). Ask questions, follow up with presenters whose work overlaps yours.
 - **Reach out by email:** If you see an author consistently publishing interesting work in your area, introduce yourself briefly, explain your research overlap, and inquire about potential collaboration.
 - **Join research networks:** Some EU-funded networks (like Innovative Training Networks under MSCA) are specifically designed to foster collaboration among early-career researchers.
 - **Social media / professional platforms:** Engage on platforms like ResearchGate or LinkedIn to spot calls for collaborators and build relationships.
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25) “I am a PhD student in AI without funding. How can I find a way to fund my research so I can focus on it?”

- **Look for departmental or national grants:** Some universities have small internal grants for promising PhD students.
- **External scholarships:** Tech companies (Google, Microsoft, IBM) often have specialized fellowships in AI/ML.
- **Apply for assistantships:** A teaching or research assistantship can provide a stipend while you do your PhD.
- **Collaborate with industry:** If your AI project has commercial potential, approach relevant companies or incubators. They may sponsor a portion of your research.