



Selection Guidelines

OBJECTIVE

The principal aim of our Selection Guidelines is to strive to support underrepresented groups and achieve a balanced gender distribution of master students locally and within the DigiQ networks.

As found by Eurostat¹, across the EU, only 20% of students studying for a physics degree in 2018 at the tertiary level were female, a percentage that has remained essentially static over the previous 5 years². Gender disparities persist in quantum science and technology, with women being underrepresented in research and leadership positions, and technical roles due to bias and systemic effects³. This impacts the quantum science and technology community by constraining the talent pool. Therefore, actionable steps need to be taken to mitigate extrinsic factors such as bias and systemic effects that may hinder opportunities for talented individuals.

Additionally, we aim to provide support for underrepresented groups through dedicated mobility funds for internships and participating in events. To put this into action, it is stated in the DigiQ Grant Agreement that 20% of student travel grants should be set aside for promoting opportunities for under-represented groups.

SCOPE

These guidelines apply to activities in the DigiQ project. They are not designed to replace or supersede policies and procedures in place at each of the partners, which take precedence. Where local guidelines are not already in place or sufficient to address the topics included in this document, we encourage partners to consider drafting and/or updating policies & procedures where possible.

¹ Eurostat is the statistical office of the European Union, responsible for publishing high-quality Europe-wide statistics and indicators that enable comparisons between countries and regions.

² Harrington, R. E., et al. (2022). Participation, performance, and outcomes in an undergraduate physics degree: Perspectives on gender and socioeconomic factors. *Phys. Rev. Phys. Educ. Res.*, 18(1), 010114. <https://doi.org/10.1103/PhysRevPhysEducRes.18.010114>

³ Quantum Flagship, EDI Working Group Survey (2021)

These guidelines apply to selection procedures for DigiQ actions carried out through central calls managed by the corresponding selection panel and/or work package leaders, and to actions where the selection process is carried out locally by one or more partners. These include:

- Selection of students for DigiQ networks.
- Selection of students for internships and/or exchange, and to receive mobility funding for these actions.
- Assignment of mobility funding to support student participation in network activities.

While strictly out of scope, we also encourage partners to consider these guidelines in selecting students entering the master's programs participating in the DigiQ program.

GENERAL GUIDELINES

This segment pertains to the selection of master's students within the local context. In addition to following local student selection criteria, we recommend DigiQ project partners to align with the [European Charter for Researchers and Code of Conduct for the Recruitment of Researchers](#). Presented below are condensed selection guidelines derived from the charter to ensure their applicability in the selection procedures for DigiQ students.

- **Judging merit:** The selection process should take into consideration the whole range of experience of the candidates, relative to their experience and the opportunities that they have enjoyed. While focusing on their overall potential as students, their creativity and level of independence should also be considered. This means that merit should be judged quantitatively (e.g. minimum scientific threshold, exam grades etc.) and qualitatively, focusing on a diversified career path. Keep in mind a wider range of evaluation criteria, such as (i) teaching, (ii) supervision, (iii) teamwork, (iv) knowledge transfer, (v) management of research and innovation, (vi) volunteering, (vii) entrepreneurship activities, (viii) development of teaching/learning material and (ix) public awareness activities. For candidates from an industrial background, particular attention should be paid to any contributions to patents, development or inventions.
- **Variations in the chronological order of CVs:** Career breaks, changes of fields, parental leave, caregiving (e.g. childcare, disability care etc.) responsibility, and breaks (or variations) in the chronological order of CVs should not be penalised. For instance, the German Research Foundation offers women a two-year extension on application deadlines after completing their doctorate for each

child they have⁴. As a result, women effectively lose two years of experience per child. Consequently, rather than being penalised, this adjustment should be viewed as a natural progression in their career. Candidates who have extenuating circumstances that may explain gaps in the academic career or other potentially negatively evaluated aspects of their application should be able to volunteer and send extra information via a separate form, such as the one outlined by DFG (Deutsche Forschungsgemeinschaft/German Research Foundation)⁵. Such information may include details of childcare leave, family obligations, severe illness, neurodevelopment disorder (e.g. ADHD, ASD etc.), disability, the refugee situation, etc. If the selection panel decides to shortlist a candidate based in part on such extenuating circumstances, it may require the candidate to provide reasonable supporting documentation, which will be kept confidential under their consent.

- **Recognition of mobility experience:** Any mobility experience, e.g. a stay in another country/region or another research setting (public or private) or a change from one discipline or sector to another, whether as part of any initial research training, or virtual mobility experience, should be considered as a valuable contribution to the professional development of a student. Students from underrepresented minority groups might have more difficulties with international mobility⁶. Rather than creating equal requirements for all students, consider each student's background when assessing their applications.

MOBILITY GUIDELINES

In situations where Mobility Committees or similar official bodies are involved in the process of selecting students for participating in the DigiQ internship and exchange program as well as in network activities, we recommend following our guidelines. They encompass structure, gender representation, delineation of responsibilities and roles among mobility committee members, inclusive of decision-making protocols, communication procedures, and avenues for appeals.

- The Mobility Committees must proactively and consistently strive to promote equal gender representation by actively encouraging participation from students of underrepresented genders. This entails ensuring a balanced demographic, with, for instance, at least 40% identifying as men, 40% identifying as women, and 20% representing any gender. This effort includes

⁴ [Guidelines: Emmy Noether Programme](#)

⁵ [DFG: Proposal and Funding Process- FAQ](#)

⁶ Malik, M., et al. (2022). Quantum researcher mobility: The wonderful wizard of Oz who paid for Dorothy's visa fees. *Quantum Science and Technology*, 7, 034005. <https://doi.org/10.1088/2058-9565/ac77b3>

advertising mobility opportunities on platforms that cater specifically to students facing gender disparities, as well as those encountering challenges such as disadvantages, career transitions, parental leave, caregiving responsibilities (such as child or disability care), and deviations from traditional career trajectories reflected in CVs.

- The mobility committee should comprise members from diverse backgrounds, mobility experiences, and perspectives to promote a broad range of viewpoints and minimise bias. Involve people of different cultures/nationalities and different professional and disciplinary expertise.
- All members of mobility committees should have equal voting/grading rights.
- Ensure that members are familiar with local policies and recognition of academic achievements from other institutions, conflict of interest, and discrimination.
- Designate an experienced chair who can lead the committee effectively and foster cooperation among members.
- Use physical or digital tools to document proceedings thoroughly during discussions, interviews, and deliberations to ensure accuracy and transparency.
- Thoroughly report to the DigiQ Executive Board on practices to assign mobility funding and incorporation of DEI guidelines.

NETWORK GUIDELINES

DigiQ networks prioritize achieving gender balance. As such, students will be assigned networks considering both their preferences and the goal of gender balance. During sign-up, students will be asked to share their gender information, with the option to decline if they prefer.

USEFUL RESOURCES

We recommend our partners go through the following resources for awareness about unconscious biases during recruitment and selection:

- Tutorial Recruitment Bias in Research Institutes (CERCA, the Agency for the Research Centres of Catalonia): [Video](#)
- Making decisions in groups: (The Royal Society): [Video](#)
- Understanding Unconscious Bias (The Royal Society): [Video](#)
- Digital tools to reveal hidden gender-coded words:
 - Totaljobs Gender Bias Decoder: [Web-based tool](#)
 - Gender Decoder: [Web-based tool](#)