

MINIMIZING UNWANTED BIASES IN THE APPLICATION PROCESS OF PHD CANDIDATES FOR THE YOUNG RESEARCHER PROGRAM IN GRAZ

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In 2022, the **Space Research Institute** in Graz (Austria) together with the **Graz University of Technology** and the **University of Graz** launched the **Young Researcher Program in interdisciplinary space science and planetary research (YRP@Graz)**. This program aims to provide a network within which the PhD candidates will benefit from the infrastructure and the international standing of the scientific landscape of Graz. For this newly established program, one major aim is to initiate an **inclusive application process** that is open to everybody with a fitting academic and scientific background. For that, we implemented an **anonymous questionnaire** for the first stage of the application process.

OVERVIEW OF THE CALL

- **Offering nine different project**
 - Ranging from the atmospheres of exoplanets via Solar and heliospheric physics through to space instrumentation.
 - Candidates had the opportunity to apply for two to five different projects.
- **Reaching for excellence**
 - The top 3 candidates were offered a PhD position, whereby they were free to select one of the nine offered project.

APPLICATION PROCEDURE

- Call published on IWF homepage and distributed via newsletters and job portals (e.g., AAS, EURAXESS, or Solarnews).
- Applicants were asked to fill out an anonymous questionnaire located on the IWF homepage.
- After the application deadline, the applications were checked for personal information. When necessary, these information were censored by the programme coordinator.
- Applications were sent to the supervisors of all projects to compile a longlist.
- Candidates of the longlist were invited for an online interview, to send a short CV, degree certifications, and a list of publications.
- All interviewees gave a five minutes presentation about a piece of research that they conducted within the last two years. After that, they received the same set of pre-defined questions. The interviews were scheduled for max. 20 minutes.
- After the interviews, a shortlist of ten candidates was compiled, of which every candidate had to send two reference letters.
- The final three candidates were selected by consensus of all involved potential supervisors.



Fig. 1 Overview on the application process for the 2022 call.

ANONYMOUS QUESTIONNAIRE

To ensure an inclusive application process, the candidates were repeatedly asked to avoid communicating any personal information regarding their gender, nationality, age, etc., as well as country of residency or alma mater in this first stage. The only personal information given was the email address. The email address was needed for further communication with the candidates and was also withheld from the appointments committee (supervisors).

Candidates were asked to give information on

- Bachelor & Master Degree (+ Master project),
- Work experience in astrophysics and related fields,
- Language, programming, and soft skills.

Further, they should write short (up to 500 words) statements on:

- Why would the offered PhD position fit the candidate's scientific and academic background?
- Description of a specific question the candidate would like to work on in the frame of the PhD studies (focusing on max. two of the offered projects).
- How would the candidate exert ethically correct behavior in his/her/their research to assure research integrity?

STATISTICS

According to the page tracking tool, the YRP@Graz homepage was accessed about 1900 times during call period (two months), and the questionnaire was viewed more than 900 times. Most people accessing the questionnaire were located in Europe (55%) and Asia (38%). Most accesses per day were traced at the day before the application deadline.

The 23 interviewees had 14 different nationalities, with the majority living in Europe, but also some located in Asia (India, Indonesia, and Pakistan). One third of the invited candidates identified as female and 20 of them have or will have finished their master studies this year or last.

The Top 10 shortlist list included six candidates identified as female.

Nationalities		Residency	
India	5	Austria	5
Austria	3	Germany	4
Germany	2	India	3
France	2	United Kingdom	3
Rumania	2	France	2
Belgium	1	Belgium	1
Estonia	1	Croatia	1
Indonesia	1	Indonesia	1
Italy	1	Portugal	1
Croatia	1	South Korea	1
Pakistan	1	The Netherlands	1
Portugal	1		
Russia	1		
United Kingdom	1		

Tab. 1 Left column gives the nationalities, right column the current country of residence of the 23 interviewees.

CONCLUSIONS

- Anonymous questionnaire seems to be an efficient tool to minimize (unwanted) bias in the first application round.
- Asking for language skills could cause unwanted bias.
- Lack of applications from the Americas could come from the different education systems. In Austria, a master's degree (or an equivalent) is needed to enrol for a PhD position.

