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Mentoring Program for Female Astronomers of the Spanish Astronomical Society: *Walking together Towards the Stars.*

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Abstract

Mentoring programs for career and personal development have shown to be incredibly beneficial for mentees, boosting their work and life satisfaction. Mentoring programs are particularly important for women in academia, where they are usually a minority. In 2021, in the context of the commission of Women in Astronomy of the Spanish Society of Astronomy, we started a mentoring program for female astronomers to support their careers. In the first two editions, we have more than 50 participants between mentors and mentees. In the mentoring program, we assigned a mentor to each mentee, according to their preferences and objectives. To encourage networking, we carry on group peer-mentoring sessions among mentors and mentees. Finally, we organized training sessions for mentors and mentees with the aim of boosting their career development.

1 Introduction

Mentoring is the act or process of helping and giving advice to a younger or less experienced person in your field. The benefits of mentoring programs in career development, personal development and mental health have been widely shown: mentoring allows the mentees to gain practical advice, encouragement and support, learn from the experiences of others, increase academic confidence, establish a support network, and ultimately increase work and life satisfaction. Thus, mentoring is particularly important in the case of women in academia, who often feel more isolated and unsupported in a work environment than their male counterparts, where they are a minority [1]. This is probably one of the reasons explaining the lack of women in academia beyond the postdoctoral stage [2]. Mentoring programs that aim at increasing diversity in academia are therefore crucial since it has been demonstrated that diverse research groups produce stronger research [3].

The Commission of Women and Astronomy of the Spanish Astronomical Society is the peer support group for women in the Society, which advocates raising awareness of the role of women in astronomy, and it is leading the change toward a less-biased academic environment (see Rodríguez-Baras et al. in this Proceedings series). In the context of the Commission of Women and Astronomy, we started a mentoring program in May 2021 for female astronomers members of the Spanish Astronomical Society. This year we started the second edition of the program, with about 50 participants (25 mentor-mentee pairs). In this proceeding, we will describe the activities we have carried out in this mentoring program during the first two editions.

2 Aims of the Mentoring Program

The aims of the mentoring program for female astronomers are focused on providing the support and tools to the younger female astronomers that are given by default to their male counterparts by the academic system since it has traditionally been male-dominated. The

three main objectives of this mentoring program are the following:

- Provide role models of female astronomers that support the younger generation of women astronomers to succeed in academia.
- Build a solid network among women of different academic environments members of the Astronomical Spanish Society across the globe.
- Help younger female astronomer to gain confidence in their skills and abilities.

3 Flow of the Mentoring Program

Any female member of the Spanish Astronomical Society may apply to be part of the mentoring program as mentor, under the requirement that they have a postdoctoral experience of at least 2 years, and a mentee, under the requirement that they have been accepted in a PhD program inside or outside Spain. The minimum time-requirement to stay in the program is 1 year, with the possibility of staying longer if they wish, and to follow the code of conduct as stated in the program webpage¹. These are the annual different stages of the mentoring program that repeat every year after we receive all mentees and mentor applications:

- We put in contact mentors and mentees, according to the preferences and career/personal objectives of the mentees.
- We offer training to the mentors and the mentees at the beginning of the program. The aim of these trainings is to clarify the role and support that mentors might offer, and prepare mentees to make the most of the mentoring relationship.
- Each trimester of the academic year, we organise a peer-mentoring session among mentors and mentees separately. The aim of these sessions is to allow engagement on networking, and to provide a space for support among mentors and mentees.
- After 4–6 months in the mentoring program, we offer another training session to further guide the mentors into the mentoring relationship with their respective mentees.
- Finally, we offer additional, non-mandatory trainings during the academic year to further support the careers of the mentoring program, with special focus in the mentees. In the next section, we will specify some of the activities during the first edition of the program.

4 Activities

These are the extraordinary activities we carried on as part of the mentoring program in its first edition:

¹<https://www.sea-astronomia.es/programa-mentoriam>

- Training for Mentors: we offered a training for all mentors in the mentoring program by Yolanda García², an expert in leadership development, diversity & inclusion, executive coaching, project management, and business consulting. The training had three sessions in which the mentors were trained to guide their mentees through the program.
- Special Chat with Dr. Jocelyn Bell-Burnell: As part of the visit of Dr. Jocelyn Bell-Burnell to the European Space Agency Center (ESAC) in Madrid, the members of the SEA mentoring program for female astronomers had the chance of chatting with one of the most relevant female role-models in Astronomy, and ask her for advice on how to further advance academy to be more inclusive for women.
- Impostor Syndrome Workshop: Dr. Paola Pinilla³, Associate Professor of Astrophysics at University College London gave a workshop in which we talked about what is the Impostor Syndrome, and how it affects women in academia and other minorities. The aim of this workshop was to raise awareness of this issue to mitigate the impact in women within our mentoring program.
- How to prepare your Postdoc Application: Dr. Violeta González Pérez⁴ gave an introductory training session for our mentees on how to write your postdoc applications. This training session was particularly useful for the mentees that were applying the first time for postdoc positions.

5 Conclusions

After the closing of the first edition of the SEA mentoring program for female astronomers, the great majority of the participants showed to be highly satisfied with the SEA mentoring program. 9 of the survey respondents graded the program with a 10/10, 12 graded as 9/10, and 6 graded the program with a 8/10. In addition, the great majority were extremely satisfied with their mentors: 16 respondents gave a 10/10 to their mentors, 3 gave a 9/10, 4 gave a 8/10, and 3 gave a 7/10. Finally, about 76% is willing to participate in the second edition of the mentoring program as well, and an extra 14% may be also participating. The second edition of the mentoring program for female astronomers is already ongoing until June 2023. The call to participate in the third edition of the program is scheduled to open in September 2023.

Acknowledgements

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²<http://www.ahorayo.es>

³<https://paola-pinilla.com>

⁴<https://viogp.github.io>

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