

# **THE HITCHHIKER'S GUIDE TO ASTRONOMY EDUCATION, PUBLIC OUTREACH AND COMMUNICATION**

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## FOREWORD

The special session “The hitchhiker’s guide to astronomy education, public outreach and communication”, held as part of the EAS 2023 annual meeting in Krakow, Poland, was an ambitious effort to convene professionals working under the wide umbrella of astronomy Education, Public Outreach and Communication (EPOC) to discuss and celebrate the ins and outs of this work at Europe’s largest astronomy conference.

Science EPOC is a social responsibility of the wider scientific community that often becomes a labour of love bestowed on a few. We strive to disseminate scientific results throughout society, we commit to reach disenfranchised audiences under a social justice lens to improve the environment both within the scientific community itself and society at large. Often unsung, the work of EPOC professionals in astronomy is crucial to build bridges between the research community and non-experts, while at the same time not always being fully understood within the community itself. With these premises, rather than focussing on results from specific EPOC projects, the Scientific Organizing Committee (SOC) who proposed the session – a sizeable team including diverse voices from several countries across Europe and beyond – invited the community to explore broad topics and reflect on structural issues in the various professions that make up this wide and multifaceted field.

The call for abstracts emphasised best practices, lessons learnt and challenges overcome, aiming to strengthen connections with the research community regarding public engagement, a key element of contemporary astronomy practice. We were delighted to receive over 60 abstracts, well beyond our expectations and the capacity for the planned one-day meeting. The day proved to be densely packed, with a crowded room hosting 14 talks and 12 poster pitches, alongside a display of over 30 online posters and a lively exchange of questions, answers, and comments. The contributions covered a diverse range of insightful topics, sparking engaging discussions throughout the day. These discussions were organised into four sections, exploring themes such as innovative and inclusive education initiatives, sustainable outreach activities, challenges and strategies in institutional communication within the field of astronomy, and the impact of various multimedia formats used in public engagement programs.

At the conclusion of the session, a survey was conducted among participants to capture key take-home messages from the day. These included terms like *inclusive*, *accessible*, *multidisciplinary*, and *universal design*, reflecting the importance of these concepts in the discussions. Additionally, participants highlighted the significance of *collaboration*, *networking*, *community support*, and *building contacts* as essential elements moving forward. Other noteworthy themes included the value of *visuals*, *ideas*, *storytelling*, *variety*, and effective *communication* strategies. And, of course: *don’t panic*, quoting from the sci-fi classic novel “The Hitchhiker’s Guide to the Galaxy” by Douglas Adams, referenced in the session’s title. This outcome instils confidence that our efforts were successful in initiating meaningful dialogue to enhance EPOC activities, striving for sustainability and benefitting all stakeholders – the public, researchers, and EPOC professionals alike.

This proceedings volume serves as a continuation of the dialogue, aiming to spotlight select topics from the conference that we believe hold broad relevance for the astronomical community as a whole. It begins with an overview of innovative learning experiences in astronomy and space science (Anjos & Doran), followed by examples of a public engagement activity aimed

at the visually impaired community (Bonne). Panagopoulou et al. then present an exploratory study on integrating robotic telescopes into classrooms, while Varano et al. offer reflections on what constitutes an inclusive education initiative and strategies for evaluating such programs. The following two papers continue the theme of diversity and inclusion, with a narrative for making astronomy and science inclusive within Africa and other non-western regions for global benefit (Leeuw) and the experience of a public outreach platform designed to promote the visibility of women and non-binary scientists and their research (Pham et al.). Further papers delve into the art of communicating astronomy to diverse audiences, from a practical guide to interact with the media and successfully disseminate scientific research (Carpineti & Evans) to the behind-the-scenes production of one of the most popular astronomy podcasts in the world (Clarke et al.). The volume concludes with a reflection on professionalisation and the access to EPOC careers, sharing the impact and lessons learnt from a long-running internship programme in science communication at a world-leading astronomy institution (Muñoz-Mateos et al.).

As we publish this volume, we are pleased to provide a platform for disseminating inspiring and urgent ideas, research and best practices in the public engagement of astronomy. It is however important to also acknowledge the challenges faced, particularly the logistical hurdles that prevented several speakers and even members of the SOC from attending the conference in person. This highlights the necessity of organising fully hybrid meetings with affordable fees, as the most marginalised people in a community tend to be disproportionately the ones who have the most trouble getting funded, taking time off from work and/or caring responsibilities to travel to conferences.

We wish to thank all participants whose contributions were instrumental in the success of this session. Their dedication to presenting research, sharing experiences, and actively engaging in discussions has truly enriched the dialogue. We also recognise the invaluable efforts of the SOC, from promoting the event, to evaluating abstracts, crafting the programme, chairing and moderating the discussions. We appreciate the opportunity granted by EAS to convene such a relevant and well-attended session. Finally, we are grateful to Giuliana Fiorentino, Editor in chief of *Memorie della Società Astronomica Italiana*, for accepting to dedicate a volume of this time-honoured journal, dating back to the very early days of astrophysics, to the wide field of public engagement, which is ever more central to the contemporary practice of astronomy.

**The Editorial board:** C. Mignone, C. Antolini, A. Carpineti, S. Kanani, N. O'Flynn, L.B.S. Pham, J. Rivero González