Lina Canas

National Astronomical Observatory of Japan lina.canas@nao.ac.jp

Hidehiko Agata National Astronomical Observatory of Japan h.agata@nao.ac.jp

Hitoshi Yamaoka

Shigeyuki Karino

karino@ip.kyusan-u.ac.jp

Kyushu Sangyo University, Japan

National Astronomical Observatory of Japan hitoshi.yamaoka@nao.ac.jp Keywords Conference; outreach; astronomy communication **3est Practice**

The 2018 Communicating Astronomy with the Public Conference is the largest and most diverse astronomy communication conference organised to date. In this article, the local organisation committee in Japan presents an overview of the implementation strategies and the lessons learned, focusing specifically on the needs of the region and the international impact of the conference.

Introduction

The CAP conference series is organised by the International Astronomical Union (IAU)¹, through its Commission 2: Communicating Astronomy with the Public². The IAU has more than 12 000 active members in nearly 100 countries worldwide. The IAU's mission is to promote and safeguard the science of astronomy through international cooperation. Since 2005, CAP meetings³ have facilitated a global exchange of ideas and best practices in informal education and astronomy and space communication. The conference helps to strengthen the local community of professionals by connecting them to a global network of astronomy communicators and giving them access to the latest trends, lessons learnt and ongoing projects.



Figure 1. The official group photo for the conference, capturing the diversity and enthusiasm of the 446 participants who attended CAP2018. Credit: CAP2018 LOC.

The eighth conference, held in March 2018^{4,5} was hosted and organised by the National Astronomical Observatory of Japan (NAOJ) and Fukuoka City and supported by a very strong team of national and local astronomy communicators, city officials and other partners. A scientific organisation committee designed the conference programme, and the local organisation committee prepared the logistics.

The conference hosted 446 participants from 53 different countries (Figure 1).

Fukuoka City Science Museum was the venue for the conference. Opened in October 2017, the museum aims to bring all of Fukuoka's citizens and visitors closer to science. It aims to make science accessible to the public and to provide an environment where children can express their creativity through fun and engaging science experiences.

Conference Content and Participants

Between the 24 and 28 March 2018, the conference hosted five plenary sessions with a total of 24 plenary talks. These included five invited speakers; 22 parallel sessions, including a planetarium session; 24 workshop sessions; 20 unique workshops; four unconference slots; 111 posters; and a special session dedicated to the 100 Year Anniversary of the IAU.

Japan was selected to host this edition of CAP to fulfil the goals of reaching the Asia-Pacific region and promoting an exchange between professionals with different backgrounds, strengthening collaboration and increasing diversity within the community. The numbers demonstrate its success, with 89 participants from the Asia-Pacific region and 198 participants from Japan. There was also a good gender balance: 47% male and 33% female (20% data not available).

Implementation

To complete the various organisational tasks that hosting an event like the CAP conference entails, the local organising committee divided its action groups into different teams: financial, public relations, operations, social events and proceedings. The finance team focused on gathering sponsors to fund participants from the Asia-Pacific region to attend and contribute to organisation costs. The public relations team focused on building dissemination networks and the visual identity of the conference. The operations team focused on providing the best onsite volunteers to facilitate registration and the smooth running of the conference. The social programme team assured an intercultural exchange and provided a warm and welcoming environment for the guests. The proceedings team focused on collecting submissions and compiling a book of the conference proceedings.

Financial

The local organising committee was particularly active in acquiring the external means for funding and for finding sponsors. Nearly 30 avenues for support were acquired in total, in addition to the grants provided by the IAU.

For the organising committees, the CAP2018 conference was a unique opportunity to promote the development and professionalisation of science communication in the Asia-Pacific region. Joint efforts between NAOJ and Japanese crowdfunding campaigns supported the attendance of participants from Asia-Pacific countries. Twelve grants were awarded to participants from eight countries and regions: Indonesia, India, Bangladesh, Philippines, Nepal, Malaysia, Taiwan and Singapore. NAOJ and crowdfunding donors rewarded the next generation of science communicators and provided them with an opportunity to attend the CAP2018 Conference. Winners were chosen based on their



Figure 2. CAP2018 artwork influenced by iconic astronomy projects depicted in Japanese style drawings. Credit: CAP2018 LOC.

potential to make a difference in science communication in their region and their impact on the future of astronomy dissemination and informal outreach in their local communities.

For the first time, one- and two-day tickets were made available, which facilitated and encouraged national participation.

Public Relations

The priority of the public relations team was to reach out to the international astronomy communication community. This work began with a proposal, in 2016, explaining the strong desire of the local organising committee to host the conference.

The team identified vital potential partners through their own extended networks at the international, regional and national level to support and disseminate CAP2018. Instead of the usual media partners, the focus here was to seek out the most active community leaders in outreach, informal education and astronomy communication. This strategy proved to be effective: nineteen dissemination partners were identified and participants from 53 different countries attended the conference.

The team also had a strong presence on social media, particularly Facebook⁶ and Twitter⁷. They focused not only on the scientific potential that a conference such as CAP could offer but also on the opportunity to know more about Japan's cultural multiplicity – the beautiful surroundings of the conference, the vibrant city of Fukuoka and the island of Kyushu. The organisers believed that immersing CAP participants in Japanese culture would forge a closeness that would reflect in future collaborations and strengthen the bonds between Asia and participants from other regions.

During the conference, the scientific organising committee's regular posts kept the international community informed about the sessions taking place and the topics discussed. #CAP2018 was trending in Japan, the Netherlands and the United Kingdom.

The public relations team was also responsible for key deliverables, including a programme book. Far more substantial than a printout of digital data, this publication required the support of a full publishing team and contained essential information



Figure 3. The logo of CAP2018. Credit: CAP2018 LOC.

for the participants not only about the scientific programme but also about other events and logistical information about Fukuoka. Other deliverables included conference bags, badges and onsite signs.

All CAP2018 artwork was influenced by iconic astronomy projects depicted in Japanese-style drawings (Figure 2). The artwork blended the deep astronomy roots of Japanese culture with its state-of the-art astronomy endeavours.

The process of creating the CAP2018 artwork started in January 2017, under the artistic direction of Adachi Design Laboratory. The CAP2018 logo followed the concept of previous CAP conferences, with sidereal motion as a motif; however, customised elements such as the stellar trail and cherry blossom petals were added in reference to the conference's location and season – Fukuoka in March 2018 (Figure 3).

The main visual graphics were illustrated by Chamooi, a young emerging illustrator who represents Japanese pop culture without straying too much into 'Japanimation nerdy'. Many items reflect both modern astronomy and Japanese traditions. The main image resembles a Hakata Gion Yamakasa, a characteristic festival car of the Fukuoka area. Individual rabbits represent people gathering from all continents and were featured on the various deliverables, including the programme book, name tags and conference bags. This well-received visual welcomed participants to the Fukuoka City Science Museum.

Operations

Onsite, one of the biggest operational concerns was managing the registration of around 400 guests on the first day. As a solution, registration was opened a day earlier, and tickets to the museum or to the planetarium show were offered as incentives to those who registered earlier. This strategy worked: around 200 registrants enrolled in the pre-onsite-registration, and this significantly decreased the burden on staff.

Other concerns were ensuring a good flow of the participants between sessions, good time keeping and strong communication between the volunteers and organisation committee members to ensure that issues were immediately addressed and resolved.

Capacity for people and posters was also a challenge. Although CAP2018 is an international conference and takes place in English, Japanese-speaking participants could listen to the Japanese translations through receivers at a satellite venue via simultaneous interpretation during the first three days. This allowed for participants to be spread across multiple rooms and solved capacity issues. Owing to the large number of session submissions, the posters were also separated into two sections.

Social Events

The focus of the social events was to share with the participants a bit of the Japanese culture and offer the local community a chance to interact with the invited participants. On the first day, the participants attended a Noh play, traditional Japanese theatre, at Ohori Park Noh Theatre. This special performance was followed by



Figure 4. For the five days of the conference, participants from all over the world shared their know-how and diverse expertise in science and astronomy communication. Credit: CAP2018 LOC.

a star-gazing session with local amateur astronomer groups and a welcome cocktail. On the evening of the second day, Professor Murayama from the Kavli Institute for the Physics and Mathematics of the Universe gave a lecture to the public as a satellite event.

The conference banquet was held at Hotel New Otani Hakata on the evening of the third day. The Japanese drum performance and Tsugaru Shamisen (three-stringed traditional musical instrument originated from Tsugaru) at the dinner were particularly well received by the foreign participants.

Proceedings

The main conference theme was Communicating Astronomy in Today's World: Purpose and Methods. The theme compelled the community to reflect on the many challenges communicators face in the post-truth era and on the role of astronomy communication in this era. At the same time, the conference was an opportunity to seek recommendations from communicators worldwide as they came together to share insights and the lessons learned.

A book was compiled containing works presented during CAP 2018, from the community, for the community. The submitted works were collected from 21 plenary talks, 106 talks and 72 posters. The book also features special contributions from invited speakers Norio Kaifu, Wanda Diaz-Merced, Hitoshi Murayama, Dominique Brossard, and the IAU 100 years session contributors.

Lessons Learned

In addition to having a strong programme, culturally linked social events and a team structure, the organising committee has put together a set of other practical lessons that led to the successful completion of the project (Canas, 2018; Canas, 2019).

Proposal

Present a clear and (nearly) complete plan within the proposal. If the conference is not funded by the central organisation, make it your priority to find sponsorship for the venue. Link the scientific goals to regional needs: why do you want to organise the conference? How will your country/region benefit? Establish a global network at an early stage and seek letters of endorsement from the community.

Network

Partner with international and global institutions in the field to increase visibility and reach within the community. The local organisation also set up a national committee to strategically link to other institutions and widen the reach of the conference and engagement within Japan.

Invited Speakers

Draw on the expertise of the scientific organising committee to choose the guest speakers. Pay attention to the diversity and representation of your chosen panel: it will make a difference in inspiring the next generation in your audience.

Participant Support

Identify early needs and possible struggles participants might face. You can lower the registration fee by getting full sponsorship for the venue. Provide grants to regional participants and promote workshops tailored to the needs of the region.

Satellite Events

Take advantage of the country's other astronomy assets. Connect with other groups in the country who might want to host related events. For us, this included an astronomy education meeting in Kagoshima and a visit to the JAXA Tanegashima Space Center.

The conference required a great deal of hard work but the returns were much more. Hidehiko Agata, chair of the local organising committee, summarised it in his opening speech:

'With CAP2018 Japan we hope we can provide you with the tools and inspiration as to when upon your return to each of your communities you can actively work towards building a better society through science communication. May CAP2018 lay the road ahead and let us walk together!'

Acknowledgments

CAP 2018 would not have been possible without the hard work and enthusiasm of the many people on the scientific organising committee, national organising committee and local organising committee. We also thank the National Astronomical Observatory of Japan for inviting CAP to Japan and the Fukuoka City Science Museum, the student volunteers and all members of Team Fukuoka representing the host city of Fukuoka for their "omotenashi" (Japanese style unlimited hospitality) spirit. Finally, we thank all of our sponsors.

Notes

¹ IAU Commission C2: https://www.iau.org/ science/scientific_bodies/commissions/C2/

² IAU Official Website: https://www.iau.org/

³ Communicating Astronomy with the Public: https://www.communicatingastronomy.org/

⁴ CAP 2018 Edition: https://www.communicatingastronomy.org/cap2018/

⁵ NAOJ Article Report: https://www.nao.ac.jp/ en/news/events/2018/20180423-cap.html

⁶ CAP Conferences Facebook: https://www. facebook.com/CAPconference/

⁷ CAP Conferences Twitter: https://twitter. com/capconference

References

- Canas L. et al., 'Communicating Astronomy with the Public 2018: Efforts on Bringing Together the International Astronomy Communication Community', Proceedings of the Communicating Astronomy with the Public Conference 2018: NAOJ, IAU, 2018, p. 284
- Canas L., et al., 'Communicating Astronomy with the Public 2018: Efforts on Bringing Together the International Astronomy Communication Community', Astronomy in Focus, Proceedings of the International Astronomical Union, Cambridge University Press, 2019, in press.

Biographies

Lina Canas is the IAU Assistant Outreach Coordinator of the IAU Office for Astronomy Outreach, based at the National Astronomical Observatory of Japan (NAOJ) in Tokyo, Japan.

Hidehiko Agata is the Chief of Education and Outreach Office of NAOJ and is the IAU Office for Astronomy Outreach Supervising Director.

Hitoshi Yamaoka is an Associate Professor and Chief of Public Relation Office of NAOJ. Born in Shikoku Island, Japan, where a beautiful night sky is available.

Shigeyuki Karino is a faculty staff at Kyushu Sangyo University, who is interested in neutron stars, science educations, and UNESCO World Heritages.

Tokyo, JAPAN 12-15 NOVEMBER 2019

IAUS358

Astronomy for Equity, Diversity and Inclusion

a roadmap to action within the framework of the IAU 100th Anniversary

https://iau-oao.nao.ac.jp/iaus358/



"Gender Equality" (con by Adrian Doguet, from Thenourpreject.com. "setronomy" (con by "Creative Stall, from thenourpreject.com. "Wheeldhair" (con by Saelul Mudim, from thenourpreject.com. "sejuity" (con by Brune Castra, from thenourpreject.com. "Devestigh" (con by Luis Prada, from thenourpreject.com. "Setuity") (Aero: Livial, from thenourpreject.com. "Sputhic")