



Science and  
Technology  
Facilities Council

# Evaluation Report

## Interact 2019



**IOP** Institute of Physics



making physics matter



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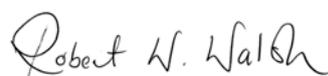
# Foreword

As the landscape of engaging the public with science continues to evolve and grow, it is vital that there are appropriate spaces for academics (early career and established), engagement professionals and students to learn together, share best practice and network across disciplinary boundaries. The Interact Symposia provide such vital opportunities, with the unique crowd sourced programme allowing this diverse community to own each event and drive the agenda from the ground up.

Interact 2019 at the University of Central Lancashire, Preston was no exception and further encouraged researchers to develop high quality engagement, evaluate their activity better, tell others openly about their engagement experiences (good and bad!) while fostering and empowering a wider community of engaged physical scientists. The event is also noteworthy in bringing together a research council, three learned societies, a trust, a university physics network and a host institution to all fully participate in the delivery of a single, focused day of activity that addressed many strategic and community engagement questions and issues.

As outlined in this report, the resulting delegate evaluation and feedback demonstrates that Interact 2019 was a very successful symposium. Overall it is the view of the organisers that the symposium met its objectives, providing a valuable platform and venue for discussion and active learning. While the report highlights what worked well, it also outlines important lessons to be learnt and recommends what needs to be taken into account when planning for the next Interact Symposium. And of course, we look forward to hearing from delegates a year on from our time at UCLan as they are asked to report on how their engagement portfolio has been enhanced or where new engagement partnerships and projects have arisen due in part to Interact 2019.

I trust you will find this report will provide helpful insights and be a useful resource. Onwards and upwards to Cardiff for Interact 2021!



**Professor Robert Walsh,**  
STFC Leadership Fellow in Public Engagement  
Jeremiah Horrocks Institute, School of Physical Sciences and  
Computing, University of Central Lancashire



# Introduction

Over the last decade there has been a significant shift in attitudes towards public engagement and a culture of change where engagement is valued, rewarded and encouraged by many institutions and, in some cases, is now an integral part of a research career.

Enabling and empowering the physical sciences community to inspire and engage audiences with high quality public engagement is a strategic priority for us. We aim to support the community to develop high quality STEM engagement, create and support networks of STEM engagement, and encourage a strong culture of reflective practice.

The one day Interact engagement conference was held on Wednesday 4th September 2019 at the University of Central Lancashire (UCLan).

The symposium, organised and funded in partnership, was an opportunity for physical science researchers and students with a strong interest in engagement (but who are not themselves outreach and public engagement professionals), to come together with the aim of improving the quality of their engagement work.

The symposium provided a multitude of opportunities; an introduction to public engagement, training opportunities, support for engagement work, the opportunity to learn from experienced public engagement practitioners, space to share good practice and evaluation tools, and time for valuable networking. The symposium took into account the current engagement landscape including citizen science and the diverse and changing means of communication, such as through social media, as engagement methodologies and offered space to explore how best to use them.

The Interact 2019 symposium was developed in partnership with the Science and Technology Facilities Council (STFC), Institute of Physics (IOP), South East Physics network (SEPnet), Ogden Trust, Royal Astronomical Society (RAS) and the Royal Society of Chemistry (RSC).

On behalf of the Interact planning group we trust that you find this report to be a useful resource and evidence base.



# Evaluation

Understanding the participant experience has always been a key part of Interact, and so we place a high value on evaluation of the symposium.

After Interact 2017 two evaluation reports were produced<sup>1</sup>. The first report (Phase 1) was based on the record of attendees and registration data, the workshop selection process, and the post-symposium evaluation survey. A year after the symposium a follow up evaluation survey (Phase 2) was conducted. Our three key objectives (to develop high quality engagement, share engagement experiences and foster a community of practice) were evaluated in the follow up report to see if there had been any demonstrable change since 2017.

In 2017 the response rate for the phase 1 evaluation survey was 70% and the rate for phase 2 was 30%, which is still a healthy and representative sample of attendees. The evidence gathered was extremely valuable and helped to inform and then shape the structure and content of the 2019 Interact Symposium and how the project partners can support Public Engagement in the future. In addition it provided quantitative and qualitative data that can be used for a longitudinal study.

During the 2019 symposium we asked attendees to set themselves three objectives. These are referenced throughout this report. We gave attendees two cards to write these on – one to take home and one to give to us. The second cards will be posted back to attendees one year after the symposium, two weeks before they are sent a follow up survey. This is to remind attendees of their objectives and allow us to evaluate how many of these objectives have turned into actions.

This report presents the initial (phase 1) evaluation data from Interact 2019, the response rate for which was 44%. We will again follow up with attendees one year after the symposium (September 2020) to evaluate the effect of the Interact symposium on their practice. Performing this multi-year evaluation will allow us to measure whether there are any positive changes taking place in the community as a result of the Interact symposia.

STFC, IOP and SEPnet will continue to run the next Interact symposium, taking place in Cardiff in September 2021. The planning group will strongly reference the outputs from this evaluation report and to achieve this will work with partners from a wide range of scientific organisations, namely the RAS, Ogden Trust and public engagement experts at Cardiff.

<sup>1</sup> <https://stfc.ukri.org/files/corporate-publications/interact-2017-evaluation-report/>  
and <https://stfc.ukri.org/files/interact-phase-2-report/>



# Section One: Symposium objectives

For the 2019 symposium we set 3 objectives, which we will be using evaluation data to measure the success of. These are based on the objectives set for Interact 2017 but have been updated to take into account learning from the previous conference. The objectives focus on the following core areas: to provide a forum for researchers at all stages of their career and to **expand and support the existing community** within the physical sciences of practitioners who develop **high quality (creative) STEM engagement and encourage a culture of strategic and reflective practice.**

## Objective One: To expand and support the existing community

(a) Run a symposium with 200 people attending, where 50% of those attending will be researchers in the physical sciences who carry out engagement activities alongside and as part of their research.

204 people attended Interact 2019 on the day, which met our target number of 200. To allow for non-attendance we capped registration at 260 and had 256 people registered. We factored in an expected non-attendance rate of 20% based on our experience from Interact 2017.

On registering we asked people to report their career types using given categories. The left chart of figure 1 gives the full breakdown based on

all of the registration categories. The right hand side chart compiles these into three categories – these are directly comparable with those from the 2017 evaluation so will be used throughout this report as a comparator. Throughout the report we use OPE professionals for outreach and public engagement professionals and ECRs for Early Career Researchers. Based on this breakdown 46% of those who registered were researchers. 44 people (17%) did not select a category on registration, which means that the proportion of academics could be higher than reported here.

Non-attendance rate was around 20% for most career categories, meaning that for most categories the proportion registered roughly matched the proportion attending. There were three exceptions, where the rate was around 50%. These were community, industry and technician. Very low numbers had registered in these categories so it is hard to draw conclusions from this. As most of the content was targeted at those working in a higher education or research setting, it may be that they felt the content was not relevant for them.

The proportion of researchers attending, 46%, was statistically consistent with our target of 50%. For comparison, at Interact 2017 50% of attendees were researchers. Although this proportion fell slightly for 2019 the conference was much better attended, so the number of researchers attending was a lot higher (119 compared to 65).

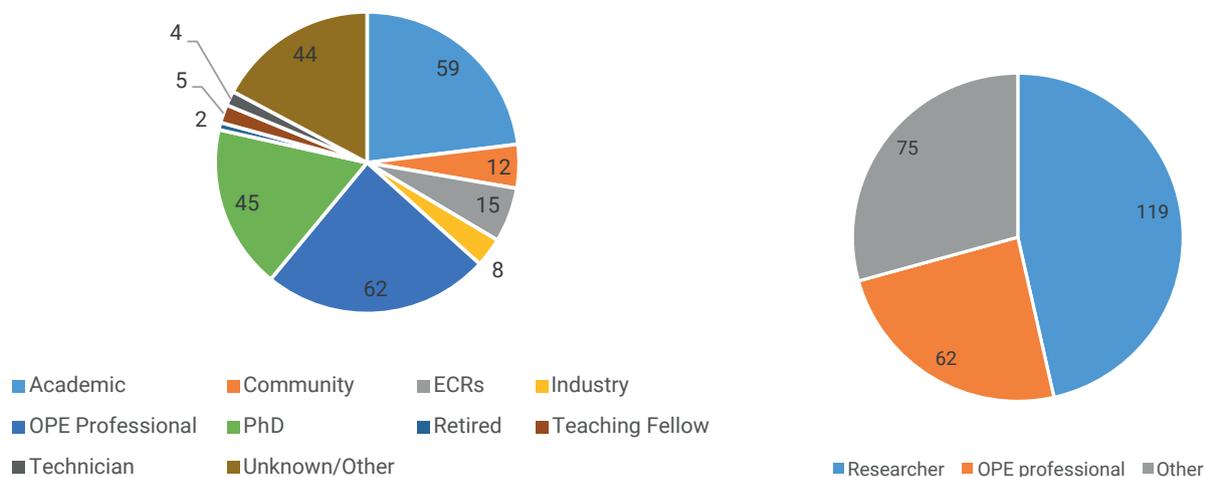


Figure 1. Breakdown of attendees by career category

We monitored registrations over the course of the registration period and identified that sign ups from early career researchers (including PhD students) was very low. To counter this we introduced an offer of bursaries of £100 for early career researchers, to be used towards travel and/or accommodation. Although Interact is free for attendees we recognise that these logistical costs can be probative for early career researchers if they cannot charge it to a grant, or access other funding sources. The bursary offer increased the number of ECRs at a late stage of the registration. We awarded 30 bursaries of which 20 were claimed; two of those who applied for bursaries did not attend the conference and 8 attendees did not return a claims form.

**Recommendation: offer ECR bursaries at the outset of registration to encourage attendance. Ensure the programme will appeal to ECRs who have just embarked on their engagement careers.**

The planning group attempted to ensure that the programme was developed to appeal to all researchers whatever their career stage was, and this was borne out by the breakdown by category. Although it was not reported as a significant factor in our non-attendance survey (figure2), there is evidence that PhD supervisors and PIs did not see the value of public engagement and

may discourage their PhD students/ECRs from attending such events<sup>2</sup>.

Amongst the ECRs and PhD students who did attend the following motivations were given:

- Desire to start a career in Public Engagement post PhD
- Keen to increase amount of outreach they do
- Learning new skills
- Learning how to evidence impact for REF

The large number of senior academics and OPE professionals attending was of considerable benefit to all. Having support from senior academic staff is vital to embed a culture of public engagement in departments and to enable earlier career staff to feel supported in their activities.

The reasons given for attending by senior academics focused around the following themes:

- Learning good practice
- Networking
- Evaluation and impact for REF
- Exploring funding routes for public engagement

In conclusion, the emphasis on learning, sharing best practice, and networking were significant drivers for all groups.

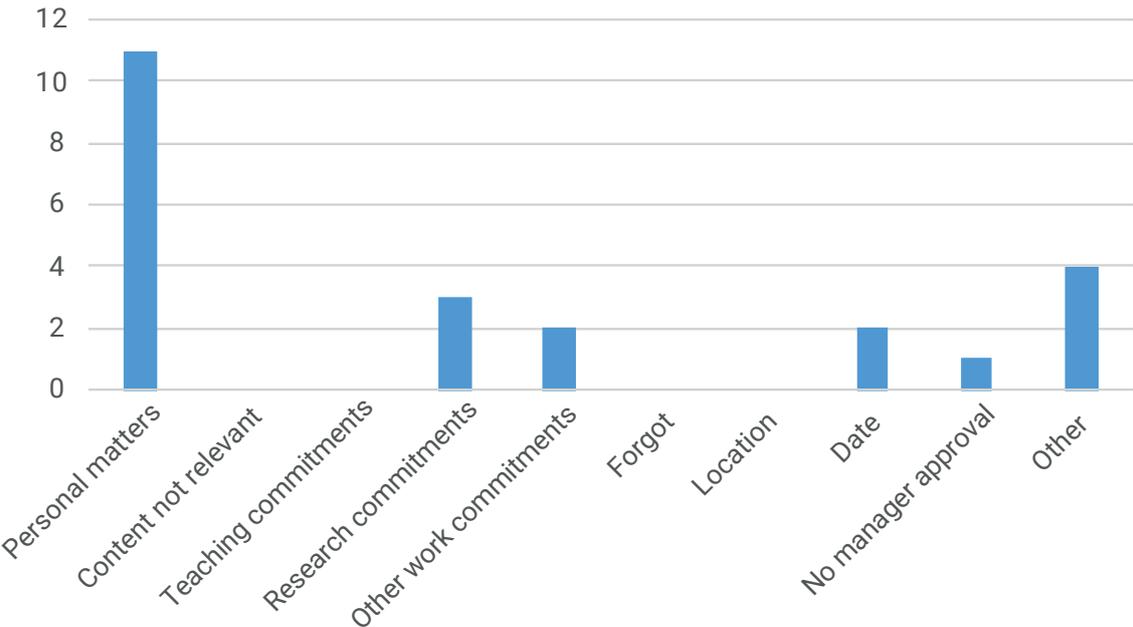


Figure 2. Reasons for non-attendance

<sup>2</sup> Public Engagement: Attitudes, Culture and Ethos (2016) STFC

## Non Attendance

We sent a feedback survey out to non-attendees in order to discover their reasons for not attending, and whether there's anything we can do to better support attendance at future Interacts. Of the 52 people who registered but did not attend 19 responded to the survey (37%). The response data is shown in Figure 2.

The majority (58%) gave their reason as personal matters, for which we did not ask for any further details. The most common other selection was research commitments, with 3 people picking this, however this is a small proportion of attendees. Respondees who selected 'other' gave reasons including early start due to long travel distance and childcare. We are aware that there is no location that will be easily accessible for everyone, so Interact is a moving conference – the hope being that if one Interact is inconvenient then the next one won't be. It came across more widely in feedback comments that the date of Interact 2019 was difficult in terms of childcare as it was held during the first week back for most schools after summer. This is something we will actively avoid for Interact 2021.

The planning group noted that in most cases non-attendance was for reasons beyond our control. The programme content also did not appear to be an issue for most, which suggests that

content was largely pitched at the right level and was of interest to prospective attendees. There were some initial concerns that the location in the North West of England would be a deterrent as it was more remote, this turned out not to be an issue generally, and was in fact welcomed by many delegates.

(b) Over 95% of the content of the programme will be generated by those attending the sessions. Over 40% of these sessions will be delivered by researchers.

On registering attendees were asked if they would like to propose a session. These session proposals were then voted on by all those registered. The organising committee used these votes to form the programme and to decide whether to offer a session, a combined session, or a space in the marketplace. Three sessions proved particularly popular in the voting so these were run twice each over the course of the day. 5 of 27 parallel sessions were generated by organisers rather than attendees, which equates to 82% of sessions being generated by attendees. The organisers chose to add in extra sessions, which were not voted on by attendees, based on the low registration rate from certain audiences. Three of the additional sessions were in the evaluation, impact and REF 2021 category and were targeted at senior academics who were

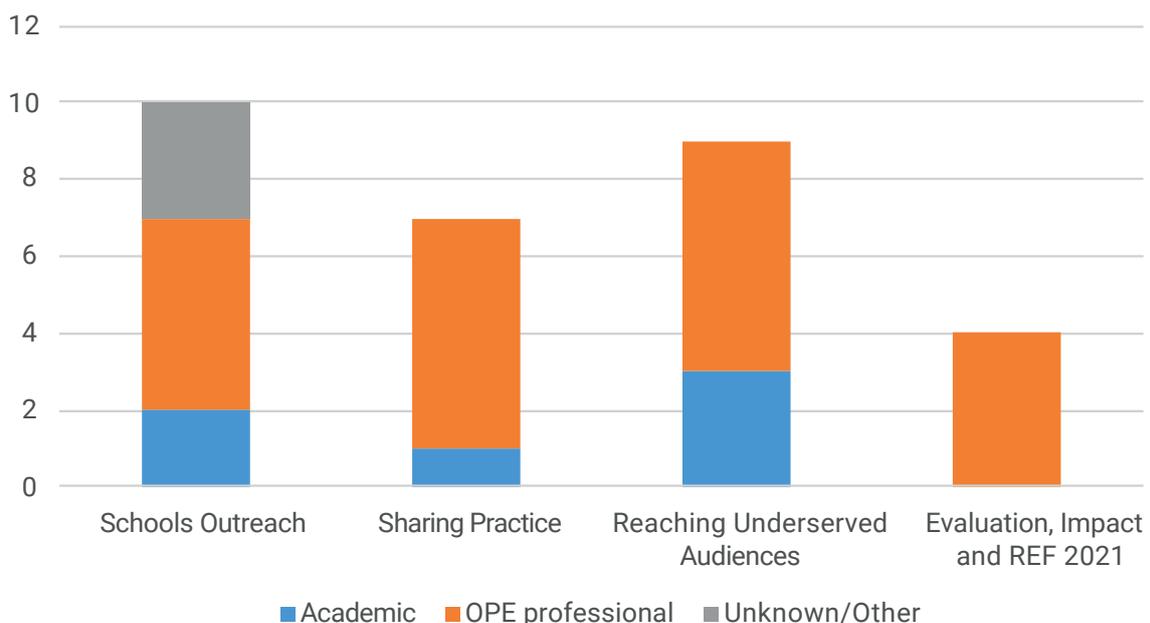


Figure 3. Number of sessions in each category split by career type

involved in REF impact case studies. The other two were in the sharing best practice category and focused on supporting early career researchers in starting their engagement journey.

To measure who was delivering the sessions we asked for the career category of the person submitting the session proposal. 6 of the sessions were submitted by academics, which equates to 22% of the sessions. If we remove the 5 sessions added by the organising committee this proportion rises to 27%. This is below our target of 40%. In some sessions there was an academic delivering alongside an OPE professional and not all of these were captured in the session submission data. Figure 3 shows the number of sessions in each category broken down by career type. This shows the dominance of OPE professionals delivering sessions across all categories. Academics delivering sessions were reasonably evenly split across the 'reaching underserved audiences', 'schools outreach' and 'sharing practice', with 3, 2, and 1 academics delivering in each theme respectively. Only OPE professionals delivered sessions in the 'evaluation, impact and REF 2021' category, and most of these sessions were those added in by the organising committee. This highlights something that wasn't taken into account when setting the objectives; the sessions in this category were added due to demand from the academic

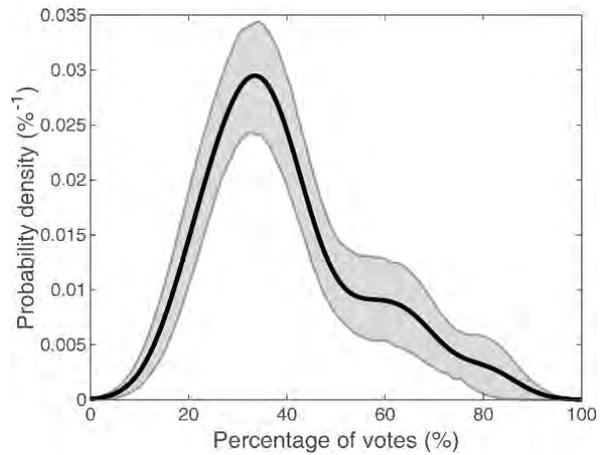


Figure 4. Graphic showing when session votes were cast

community, however they currently don't generally perceive themselves to have the expertise in that community to deliver the sessions. This means that if we continue to aim for a programme that is almost entirely co-created we risk not including valuable material which needs to be delivered from experts external to that community. This is something we will take into account when planning Interact 2021, and we will re-frame this objective accordingly.

Figure 4 shows how votes were distributed amongst proposed sessions. A small population of sessions got the majority of the votes - they were

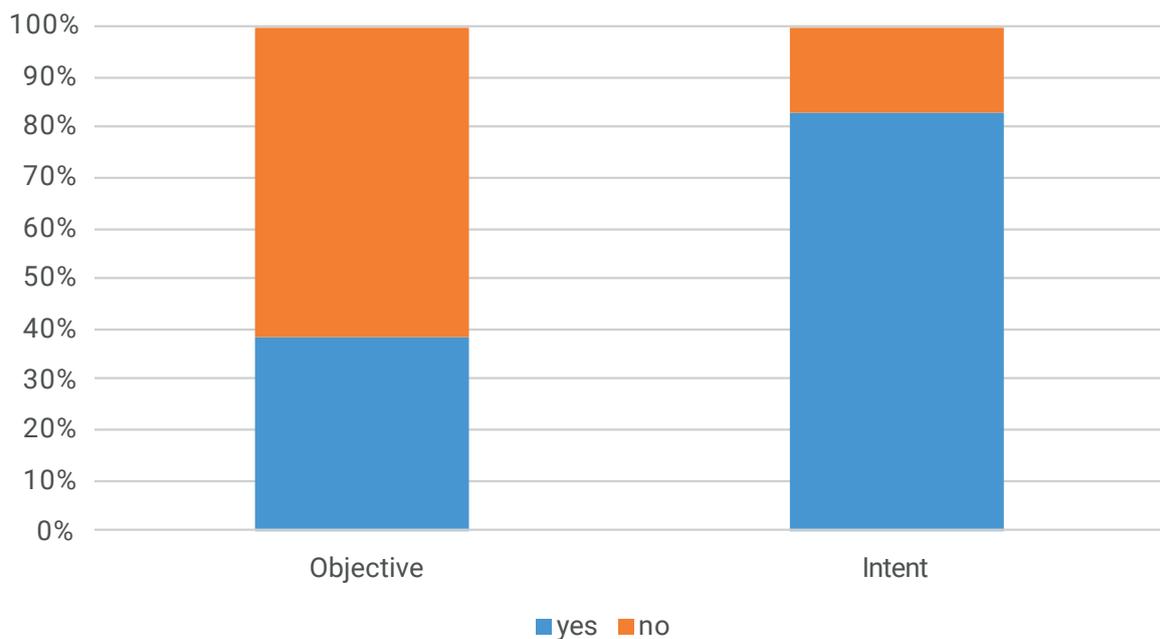


Figure 5. Proportion of attendees who set networking as an objective (left) and who intended to network (right). N = 89

sessions intended to help inform the practice of others. Generally sessions which were more focussed on e.g. sharing the results of a specific project were less popular in the voting. As mentioned above, to account for this we scheduled the most popular sessions in twice to ensure that lots of people could attend these.

Additionally, more OPE professionals registered within the deadline to submit sessions, so were overrepresented in session submission. This is something which we need to consider when planning registration and session submission for Interact 2021. We need to ensure that we are reaching our academic attendees early enough in the conference organisation process to allow them to submit and lead on sessions. Full details on the sessions and the submission process are given in section two.

(c) Over 50% of those attending will have networked and created links with others who have similar engagement interests to them.

In the evaluation survey we asked attendees whether they intended to network at the conference, and whether additionally they had set

networking as one of their three objectives. Of the 89 people who responded to the survey 83% said they intended to network and 38% had set this as one of their three objectives. We will measure in the follow up survey the number of respondents who successfully networked, both on the day and over the following year, at Interact 2019.

(d) Have another symposium within 2 years of the current symposium.

We will hold the next Interact symposium in Cardiff in September 2021.

(e) Over 15% of attendees will not have attended another public engagement conference or symposium in 2019.

This will be measured in the follow up survey.



**Objective Two: Higher quality STEM engagement.**

(a) Over a third of those attending will change how they approach a current project based on learning from Interact.

We asked attendees whether any of their three objectives included intending to change how they approach a current project based on learning from Interact. Of the 89 responses 54% said that this was one of their objectives. In the follow up survey we will measure how many people report having changed their approach one year after the conference.

(b) 20 new public engagement projects will be initiated as a result of symposium. Over half of these would have gone through a competitive process such as the IOP Grant Scheme and the STFC Spark Awards throughout 2019 and 2020.

This will be measured in the follow up survey.

(c) One of these projects will be awarded an engagement award. This could be from the NCCPE, SEPnet, IOP etc.

This will be measured in the follow up survey.

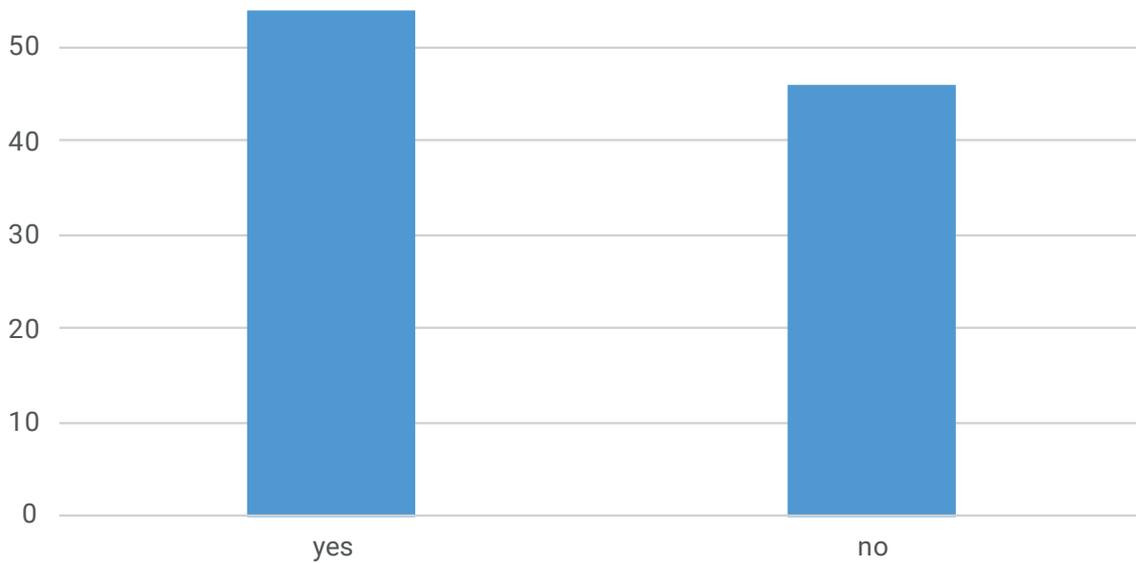


Figure 6. Number of attendees who plan to change their approach to a current project based on learning from Interact. N = 89

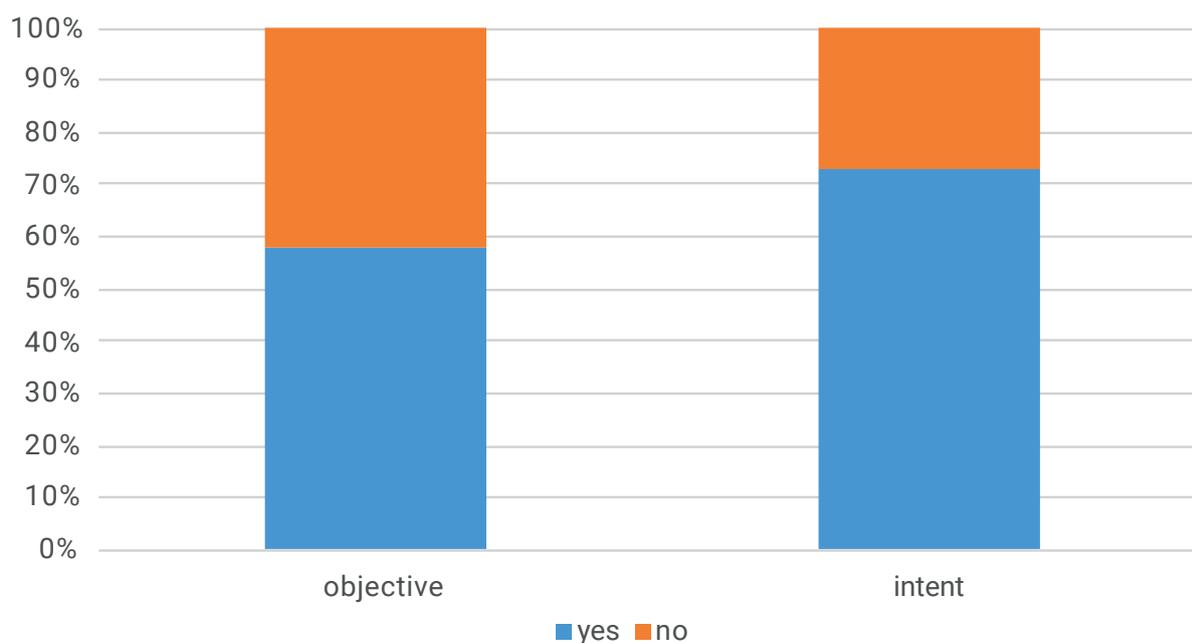


Figure 7. Proportion of attendees who set change of behaviour as an objective, and overall proportion intending to do this. N = 86

**Objective Three: Encourage a culture of strategic and reflective practice.**

Over half of those attending will:

- (a) Change how they view their Public Engagement activities, thinking of them as part of a wider strategy rather than one-off activities.
- (b) Take more of their Public Engagement time after to reflect on their engagement activities, including evaluation, dissemination and reflection.
- (c) Take more of their Public Engagement time to look for evaluation reports from previous activities similar to those they are planning.

For measuring Objectives (3a - 3c), which are based on personal behaviour rather than an intended specific personal action, the survey

asked a single question based on each of these behaviours, and then two questions which asked if these behaviours would change as a result of attending Interact. The responses to this question are found in Figure 7.

Of the 86 people who responded to all parts of this question 58% reported that they had set changing one of these behaviours as an objective and separately 73% of respondees said they intended to change a behaviour.

Figure 8 shows answers to 'how embedded is your individual public engagement within the rest of the department' crossed with intention to change behaviours. 23% of those who responded say that none of their public engagement is embedded. Of these, 70% intend to change behaviours. We will be able to measure in the follow up survey whether the intent to change behaviours has increased how embedded activities are. 32% of responders said that nearly all of their activity was embedded. Comparably after Interact 2017 14% said none of their engagement was embedded and 36% said nearly all activity was embedded.

This came as a surprise to us at the time as we felt the spilt would have been more weighted towards activity not being embedded. Equally this may have been because the 2019 conference had a wider reach than 2017 (204 attendees vs 148) so

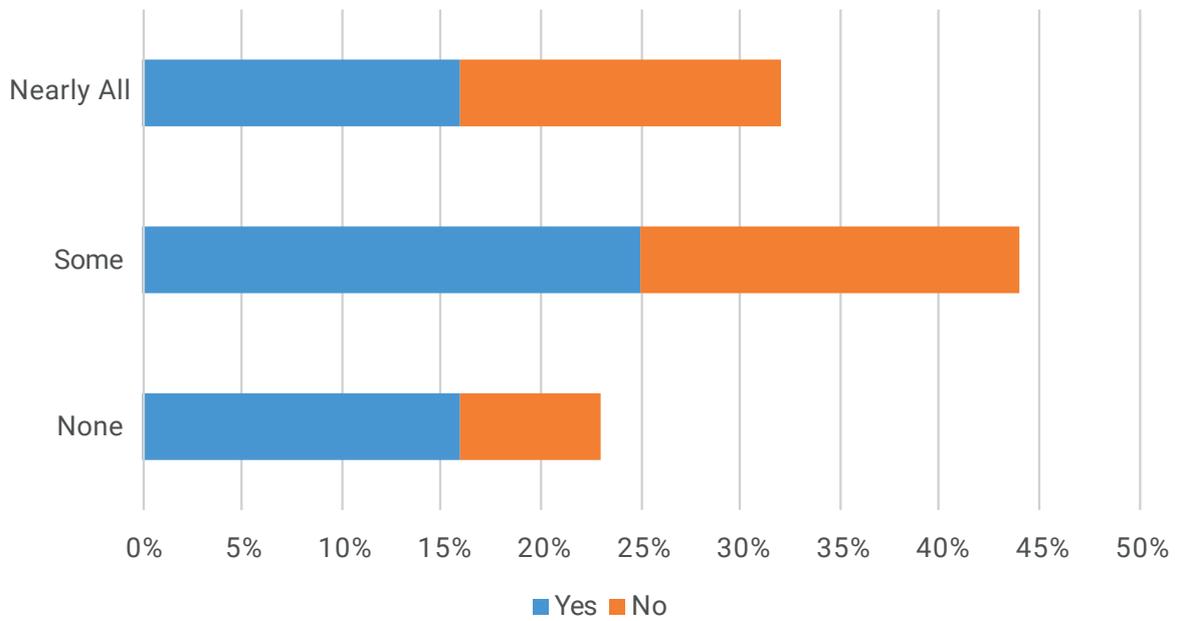


Figure 8. Answers to 'How embedded is your public engagement' crossed with intention to change (N=85)

those at the 2017 conference may have generally been more bought in to public engagement already. Therefore the seemingly negative shift in the 2019 data may be because participants are becoming more realistic when assessing their engagement, or may be because in the departments of those who responded in 2019 engagement genuinely is less embedded. It will be interesting to monitor responses to the follow up survey and to the evaluation of Interact 2021 to see what happens to this trend.

Figure 9 shows answers to 'Do you take time to reflect on your own public engagement activities?' crossed with intention to change. 52% of respondents reported that they sometimes did and 42% said they always do, with only 6% saying they never reflect on their activities. This is effectively consistent with 2017 where 51% said they sometimes reflected and 36% said they always did.

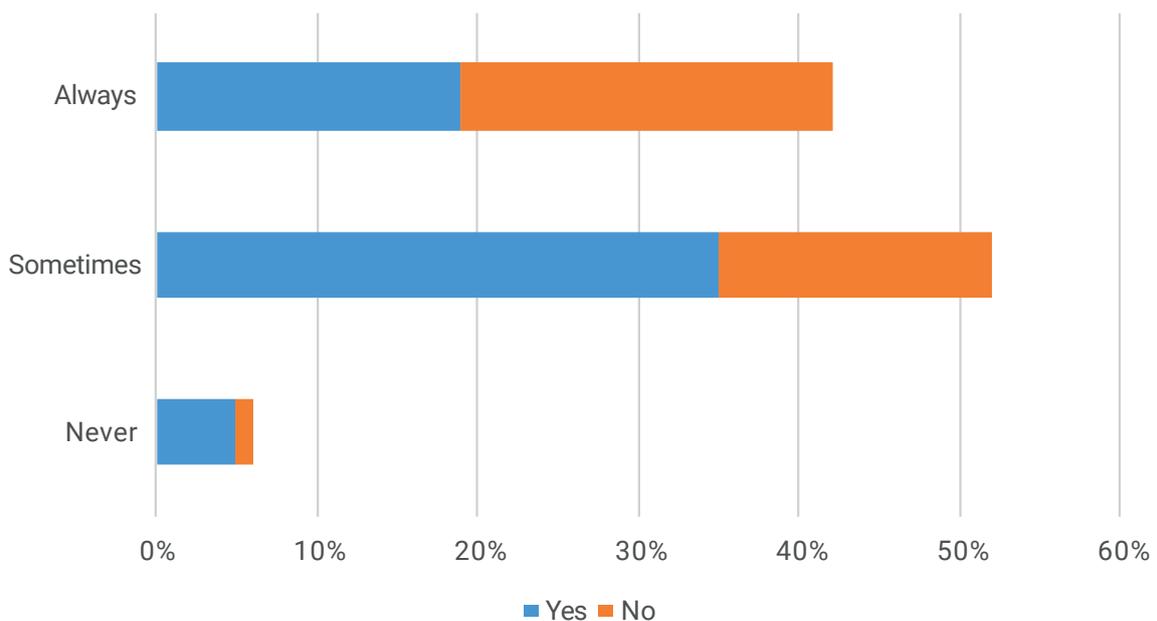


Figure 9. Answers to 'time to reflect' crossed with intention to change (N=86)

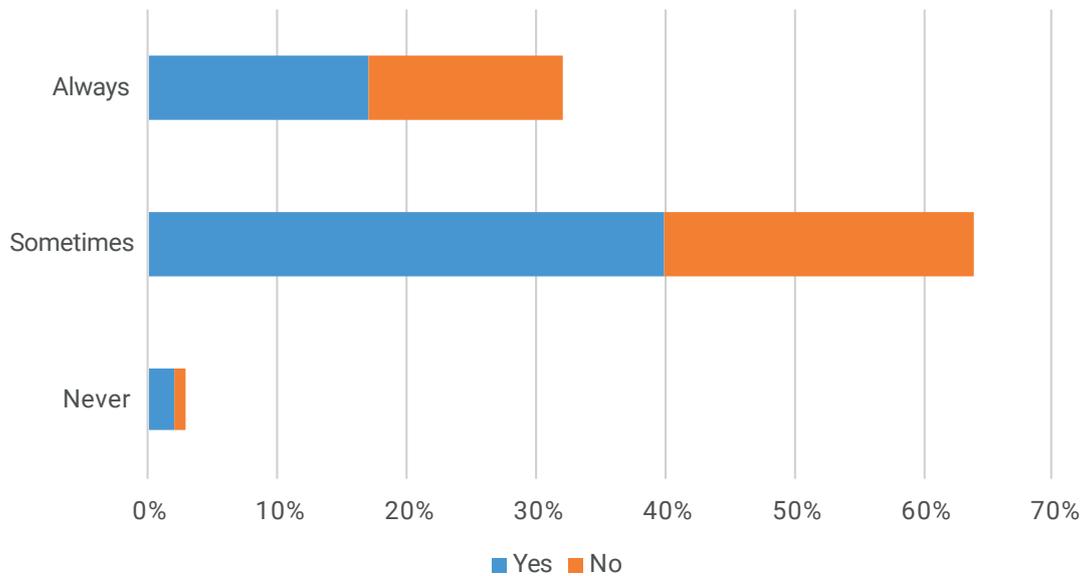


Figure 10. Answers to wider practice question crossed with intent to change (N=86)

Figure 10 shows the answers to ‘Do you take time to look at wider practice in the engagement community?’ crossed with intention to change behaviour. 64% of respondees say they sometimes look at wider practice and an additional 32% say they always do. This is very similar to the percentages reported in 2017.

#### Intentions to change – by type of attendee

Additionally we have looked at the objectives people set themselves broken down by career type. This breakdown is shown in figure 11.

Networking was the most popular intent across all categories with 82% of both researchers and OPE professionals reporting intending to network and 86% of others reporting intending to network. For researchers and OPE professionals the next most popular was the intent to change behaviour, and the intent to start a new project was least popular. For others this was the opposite way round. This may be because the other behaviour category focused on best practice and evaluation which could be seen as particularly relevant in a REF context, therefore likely to be a bigger driver

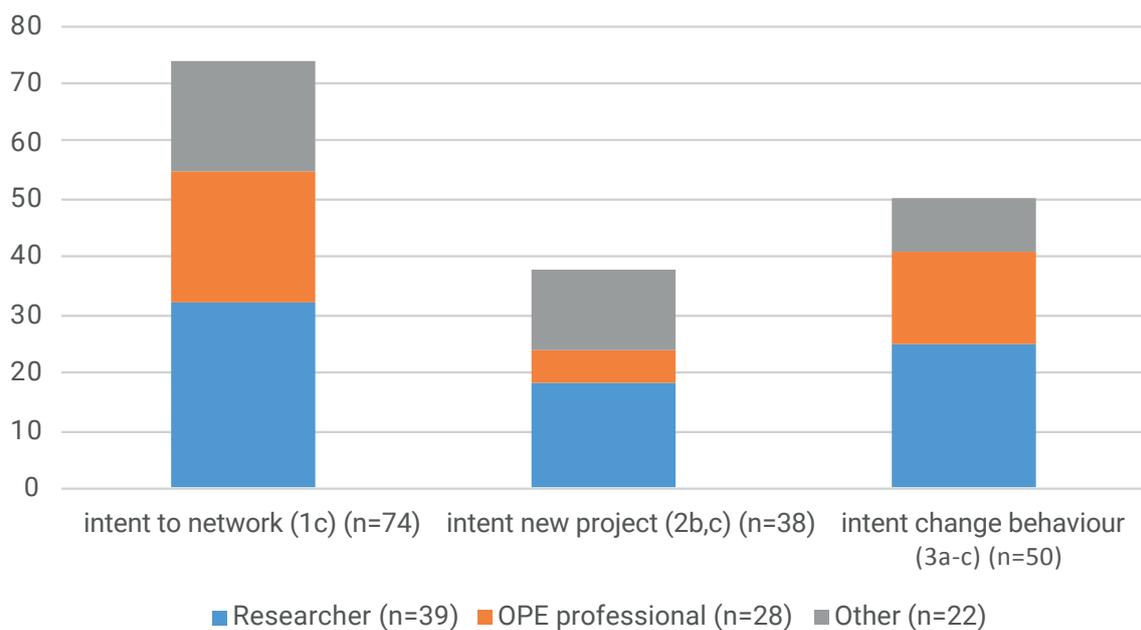


Figure 11. Objectives attendees set split by career type

for those working in the higher education sector (as the majority of attending academics and OPE professionals do) than outside of it.

### Overall comments on objectives

We can't measure the outcome of the majority of the objectives until we conduct the follow up survey in September 2020. We partly met objective 1a as we reached the number of attendees we aimed for however not quite 50% of these were from the research community, although this was not statistically significantly different. We have identified that bursaries for ECRs aid their being able to attend the conference so we will advertise these earlier in the process for Interact 2021. We did not meet objective 1b as less than 40% of sessions were led by academics (this number for Interact 2019 was 22%). Additionally, our objective was that 95% of the programme would be generated by attendees, whereas in reality this proportion was 82%. This was due to the fact that sessions were added in by the organisers which would appeal to academic audiences, as we recognised we had not attracted our target number of academics. We are aware that academics generally registered later than OPE professionals and therefore many were too late to submit a session proposal. For Interact 2021 we will focus on targeting advertising to academics much earlier in the process and encourage them to submit session proposals.

Objective 2a states that we aim for one third of attendees to change their approach to a current project based on the learning from Interact. 54% report that this is one of their objectives, which is a positive indication. We will follow up on this in the September 2021 survey. Similarly Objective 3 states that we aim for half of attendees to change a behaviour. 58% of attendees reported that they had set changing a behaviour as an objective and 73% said they intended to change a behaviour. We will look at follow up data to see if these intentions translate to change.

### Additional personal objectives

Some attendees shared other actions that they would take as a result of attending INTERACT. Broadly speaking these fit into the following categories:

- Looking in to or applying for public engagement funding.
- Embedding and improving evaluation practice, including evidencing for REF.
- Improving visibility of PE in departments and gaining more uniform support from senior staff.
- Identifying ways of sharing public engagement work, such as publishing in journals (e.g. Research for All<sup>3</sup>).

3 <https://www.ucl-ioe-press.com/research-for-all/>



# Section Two: Logistics

## Planning and marketing

Advertising for Interact happened in two stages as the concept was to facilitate the delegates themselves in putting together the programme, the first announcement (late April/early May) was intended to capture a large number people across all audience categories with the intention of:

- Explaining the programme concept – session submission and voting
- Registering in order to submit ideas (end of April deadline) and vote (end of July)

In order to reach the intended audience the first announcement was sent to those indicated in table 1. Emails sent to different mailing lists were staggered to allow for the fact that some of the recipients may be in more than one of them.

Who?	Audience category	How Many
All postgraduate members of the Institute of Physics	Early career researchers	361
All branch committee members of the Institute of Physics	Mix	12,119
All members of the Physics Communicators group (Institute of Physics)	Mix	749
OPEN (outreach and public engagement network supported by the Institute of Physics)	Outreach officers, public engagement professionals and others	42
BIG-chat	Outreach officers, public engagement professionals and others	500
PSci-comm	Outreach officers, public engagement professionals and others	4,800
STFC	Researchers, Grant Panels, PE managers, National Laboratories, Grant user lists	1,600*
SEPnet Outreach Officers Weekly Mailing List	Outreach officers, Public engagement professionals.	15
SEPnet Heads of Department, to forward to their departments	Researchers including PhD, ECR and Senior Academics	200-300
RAS	Fellows	4000
Ogden trust		
RSC	Fellows	54,000

Table 1. Numbers reached by Interact promotion







## Building the programme

In planning Interact 2019 we have taken on board feedback from Interact 2017. The core themes attendees of Interact 2017 reported being keen for future Interacts to include were:

- To explore how stories of STEM research can be used to build a society that values and participates in STEM.
- To create better community networks in STEM engagement.
- Sharing success stories and the challenges (what worked and what didn't) of STEM engagement and how we can learn from them.
- To highlight the importance of public engagement activities in raising the profile of research conducted at their own organisations, and to make the role of their laboratories 'part of the story'.
- To build capacity by developing public engagement skills via fully interactive workshops for researchers.
- To hear from researchers about their needs including funding and training, reward and recognition and wider benefits - influencing policy makers, government, and embedding public engagement in their own work.

- To stimulate ideas for public engagement activities by highlighting case studies and sharing good practice with each other and expert practitioners.
- To provide guidance and identify resources for enthusiastic researchers for their public engagement work.

We distilled these into four key themes which we used for Interact 2019. All sessions in Interact 2019 fit into at least one of these themes, and many sessions covered multiple themes. Sessions were colour coded by main theme in the programme to easily enable attendees to identify the sessions which would be of most use for them. The four session themes for Interact 2019 were as follows:

- Evaluation, Impact and REF2021  
How to do effective evaluation and demonstrate impact, sharing case studies, what worked for REF and what didn't. Looking forward to REF 2021.
- Reaching underserved audiences  
Working with the right partners, raising your skills and working with STEM influencers to reach low science capital audiences.



- Schools outreach  
How to work with young audiences and increase their science capital and STEM linked aspiration.
- Sharing practice  
Understanding your audience, reflective practice and what constitutes high-quality public engagement.

Following the first announcement, there were 25 session proposals and 16 marketplace activity submissions from the delegates themselves. As for the 2017 Interact event the programme took into account the session theme and popularity; ensuring that the most popular sessions were not pitted against each other, were assigned the largest rooms, and were repeated in the afternoon sessions. In addition where activities were similar, session providers were asked to share sessions with other activity providers, especially where these targeted the same audiences. All of the 16 marketplace sessions were taken forward and allocated a space and included interactive activities that could be run as drop in sessions. Additionally topics that were identified by the delegates as being something they would like to see but had not been submitted were then sought, for example YouTube communication and evidencing impact in REF 2021.

The draft programme was confirmed by the end of June 2019; firstly with those who had submitted session proposals, before the full programme was announced to the 264 delegates who had registered to attend.

At the time of the conference only 44% of attendees were aware that the majority of the sessions had been voted on. We did have some problems during the organisation of Interact 2019 with communicating to attendees, with some flagging that emails were getting stuck in junk folders. We are reassessing how we register and communicate with attendees for Interact 2021 to ensure that we have robust communication methods in place.

### Running the Symposium – On the Day

The results from the post-symposium survey have allowed us to look at how well aspects of the day were received and to gather feedback from attendees. This will be used to inform the planning of Interact 2021. Figure 18 shows feedback on the day's structure from all participants. Figure 19 shows feedback from those running workshops, and figure 20 shows feedback from attendees running stalls in the marketplace.

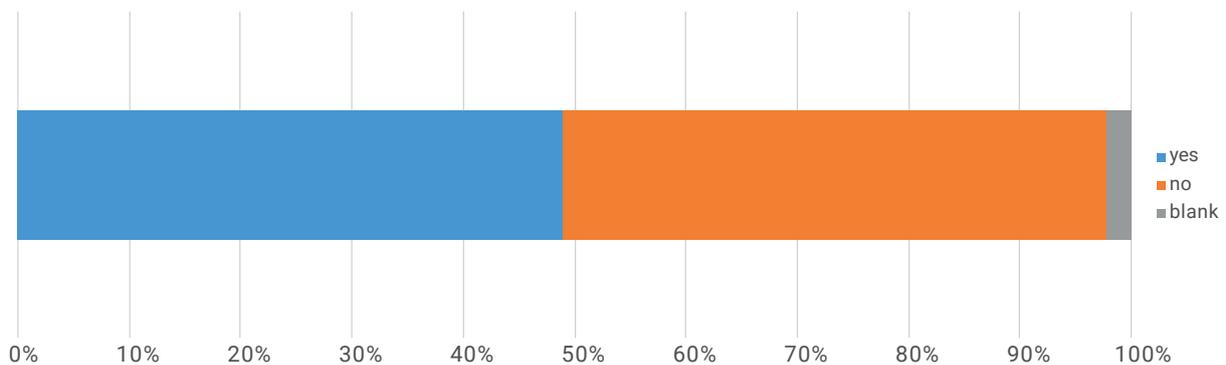


Figure 17. Responses to 'Did you know that most of the sessions were being delivered and had been voted on by those attending?'

Most feedback received from Interact 2019 was overwhelmingly positive with participants particularly highlighting enjoying the wide range of content in the programme and the opportunities for discussion during sessions. The feedback represented in figures 18-20 allows us to highlight key issues with the programme design:

- There were too many parallel sessions at any one time
- There were too few breaks in the day and not enough time to network
- There was a lack of information reaching some

participants before the symposium

Workshop leads were briefed to conclude their sessions in 45 minutes to allow sufficient time for questions and to facilitate transfer between them, however some sessions slightly overran due to lively discussions. To take transfers into account 10 student ambassadors were employed to help delegates move between sessions and ensure activity providers and rooms were fit for purpose. Student ambassadors were also asked to note numbers of attendees per session which is provided in table 2.

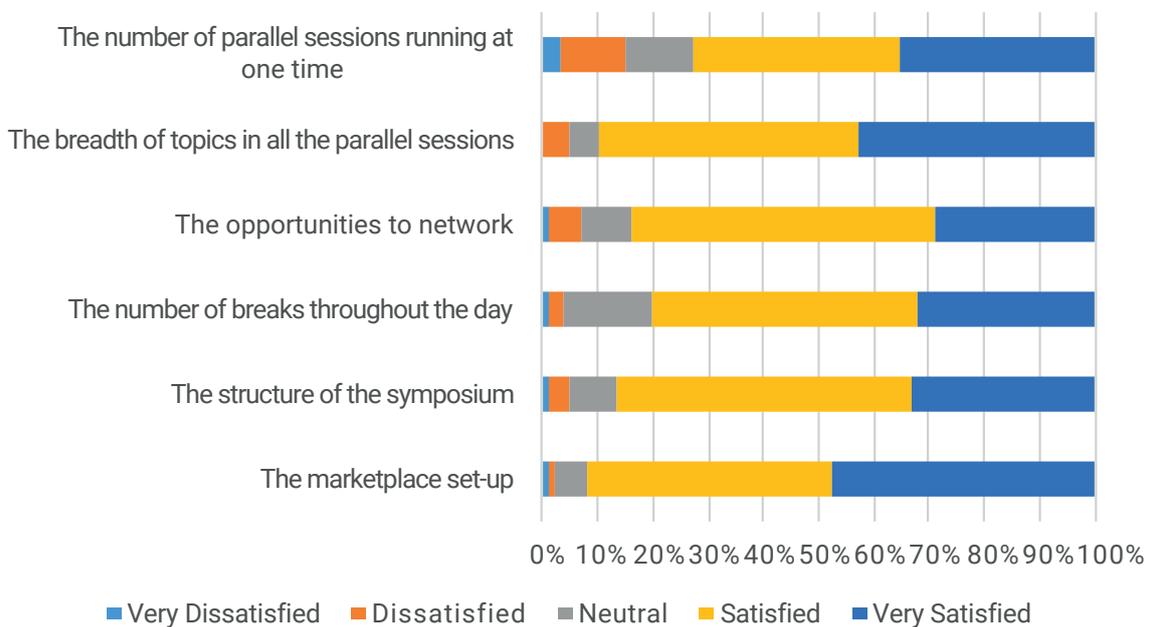


Figure 18. Delegate satisfaction

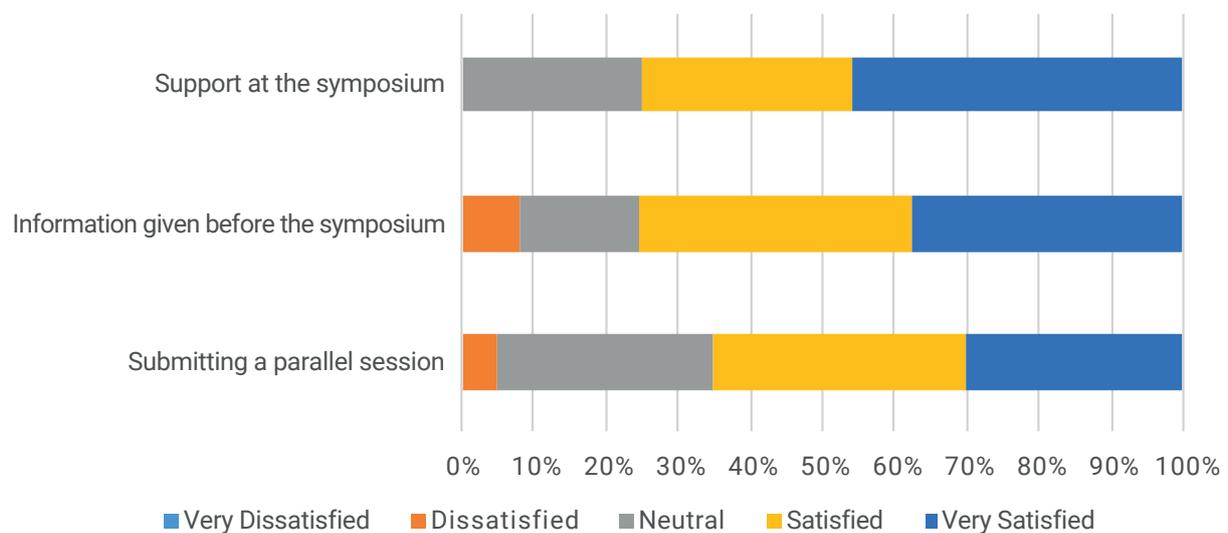


Figure 19. Session leader's feedback

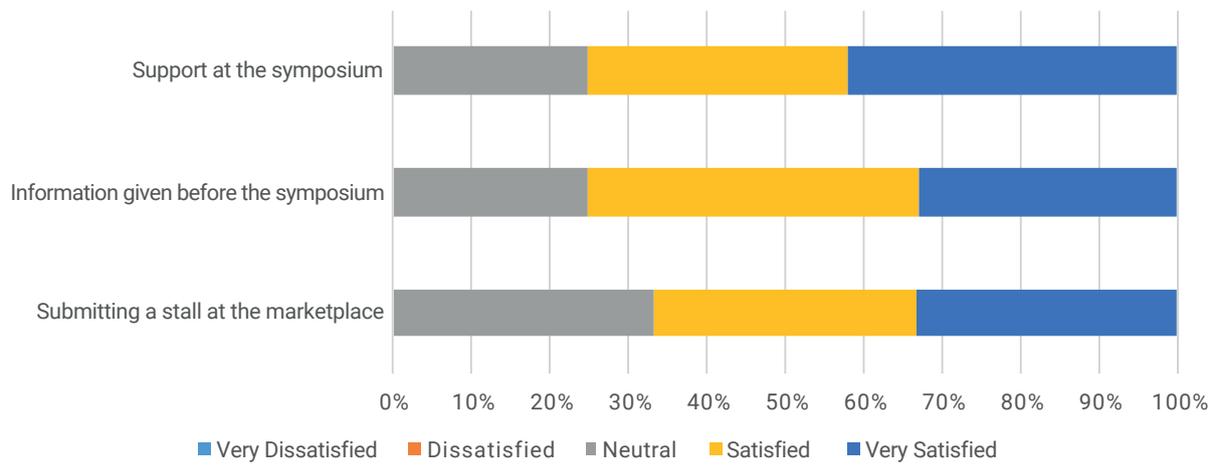


Figure 20. Marketplace stallholder's feedback



	Session 1	Session 2	Session 3	Session 4
<b>DB254</b>	Can I ask you a Question 23	How to get started in Public Engagement 15	Can I ask you a question 25	STFC's Wonder Initiative: help us shape our national programme 35
<b>DB247</b>	Evaluating drop-in activities 30	Driving and sustaining engagement in our departments 34	Evidencing impact in REF2021 42	Hands on engagement: not one size fits all 17
<b>Young Scientists Centre</b>	Engaging with primary school students through local practical activities 11	SunSpace Art+ Changing cosmic perceptions 12	The physics mentoring project 15	Future places, space and faces 16
<b>HB003</b>	How to change childrens stereotypes of scientists+ shattering Stereotypes 29	How to undertake a programme of deep research based engagement with schools and evaluate it 26	Communicating science to a visually impaired audience+ Music and Mutation & Astrophysics for All 34	Embedding science within the art world 18
<b>HB015A</b>	Devising interactive meaningful activities in Public Engagement 32	I'm a scientist through a science capital lens 8	SunSpace Art 7	How to get started in Public Engagement 12
<b>FLT2</b>	Craigmillar community science partnership: working for and with an Edinburgh community 14	Breaking barriers- community university partnership 24	Science through story 17	Creating a conversation 5
<b>FLT4</b>	Examining the sector 16	The interactions of multiple barriers to Science, Technology, Engineering and Maths (STEM) 34	Examining the sector 20	The interactions of multiple barriers to STEM 32

Table 2. Session attendee numbers

- Reaching underserved audiences  
■ Evaluation, impact and REF2021
- Schools outreach  
■ Sharing practice

## Venue & Catering

The University of Central Lancashire (UCLan) is well placed as a conference and events venue as it has a city centre location and is within a 15 minute walk of Preston railway station. The campus is also compact and new with state of the art facilities and large number of meeting rooms, lecture theatres, and the Young Scientists Centre (which could accommodate science experiments and demonstrations in a laboratory environment). In contrast to the University of Birmingham one of the key attractions at UCLan was the availability of a large open plan exhibition area (marketplace) and adjacent catering facilities large enough to accommodate over 250 delegates. In addition the UCLan conference and events team were critical partners in planning catering provision and event management. Advance planning was essential and an event plan and market place plan was prepared in advance of market place exhibitors setting up. In order to maximise the best use of timings for the symposium the planning group decided to hold a networking event in the evening before the main symposium, this was attended by over 50 delegates and was generally well received.

Delegates were asked to rate their satisfaction and the responses are displayed in Figure 21.

Where delegates weren't satisfied the key issues identified were:

- Catering was short on vegetarian and vegan options
- Many people were unaware there were evening drinks
- Lack of communication before event
- Venue layout was confusing with long distances between rooms

As we have mentioned previously, the organisation group had some problems communicating with delegates before the event due problems such as emails getting sent to junk folders. We are reassessing how we register and communicate with attendees for Interact 2021 to ensure that we have robust communication methods in place.

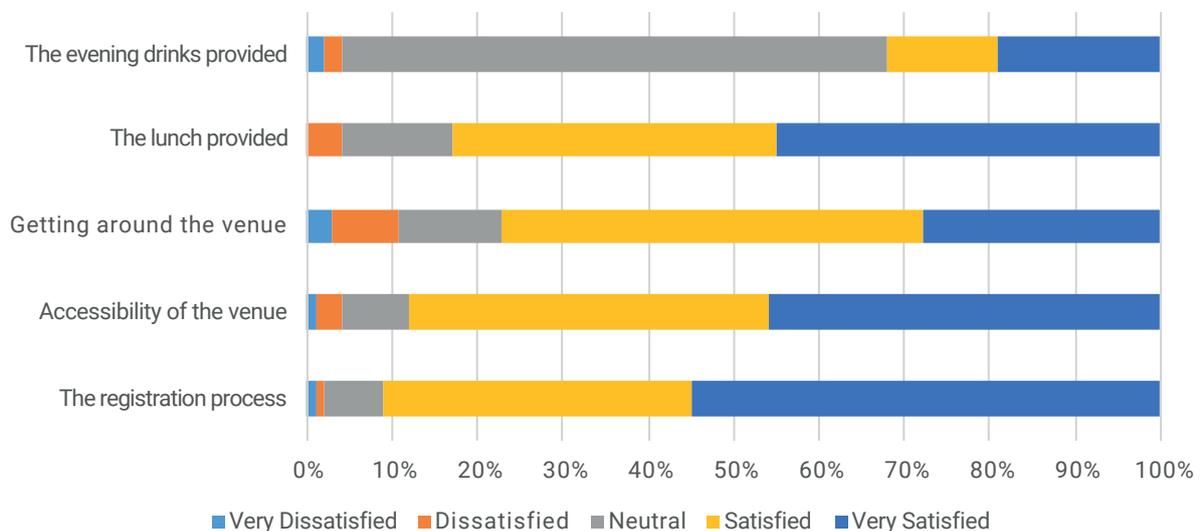


Figure 21. Session leader's feedback

## Section Three: Wider context

### Future Interacts

We are keen for Interact to become a fixed event in the calendar for the physical sciences research community.

We are also keen to expand this community to include more participants from the STFC science facilities and other industries outside universities. Within universities, we need to ensure Interact is suitable and appealing to researchers at all levels. We feel this would be mutually beneficial for all groups, in terms of the potential for networking and cross-pollination of ideas, perspectives and approaches to public engagement and outreach.

Hosting Interact 2019 at the University of Central Lancashire (UCLan) was not a geographic or logistic deterrent and helped us reach audiences in the north of England and Scotland that would have been unlikely to attend a London-based event. Attendance on the day comprised of 46 Universities across the UK, 14 government labs/facilities/councils, 5 membership organisations and 18 outreach/public engagement organisations.

We still plan to host Interact every other year, as this feels realistic in terms of the time commitment required from the planning team and also, most importantly, in terms of keeping the content of the programme new and cutting-edge. There was certainly a strong feeling that Interact could be extended over two days to allow delegates to attend more sessions, networking opportunities and the ability to share good practice. We hope that the momentum now generated by two Interact symposia has now firmly established a community of practice. Bearing in mind the logistical, financial and time pressures on delegates attending a two day symposium the overall consensus was to continue with a one day symposium for 2021. This will allow Interact another two years to embed within the community and we will revisit the idea of a two day symposium after Interact 2021.

Public engagement with science, technology and engineering is a continually evolving field with new discoveries and innovation taking place frequently. The direction of travel can sometimes be heavily influenced by external drivers e.g.



the state of public debate, finances and the forthcoming the impact agenda (Research Excellence Framework 2021), as well as changing funders' requirements.

We continued the bold move to employ a largely bottom-up approach to programming Interact 2019. Most of the content of our programme was derived through a callout for workshop content within the registration process, aimed at encouraging sharing of best practice. This asked those registering to consider submitting a proposal for a workshop they themselves could deliver to share their own learning and expertise in outreach or public engagement. We believe this approach, although not without risks (few could have submitted content), ensured that attendees felt greater ownership of the programme and made clear their experience had value to others. In summary co-creation is the key to sharing ownership.

Feedback endorses the approach taken. We will continue to promote sharing of best practice within the community and looking ahead we would continue to follow a similar approach

to coordination and development of the event content. We are indebted to the generous contribution of our attendees for making Interact 2019 a significant success and we continue to wish to promote the concept that Interact is a community-owned event.

The next Interact symposium will take place in Cardiff in September 2021.

**What's next for the sector?**

By carrying out longitudinal evaluation over the Interact symposia we can track how the sector is assessing itself in terms of public engagement. To do this we are using the EDGE tool<sup>4</sup>. This is a self-assessment tool which measures how embedded public engagement is at an institution. Figure 22 shows how attendees rated their institution using the tool. The majority (40%) indicated that their department was in a 'developing' phase. This has shifted slightly from 2017 where 48% rated their department as developing. This shows a small shift towards public engagement being more embedded in institutions since 2017.

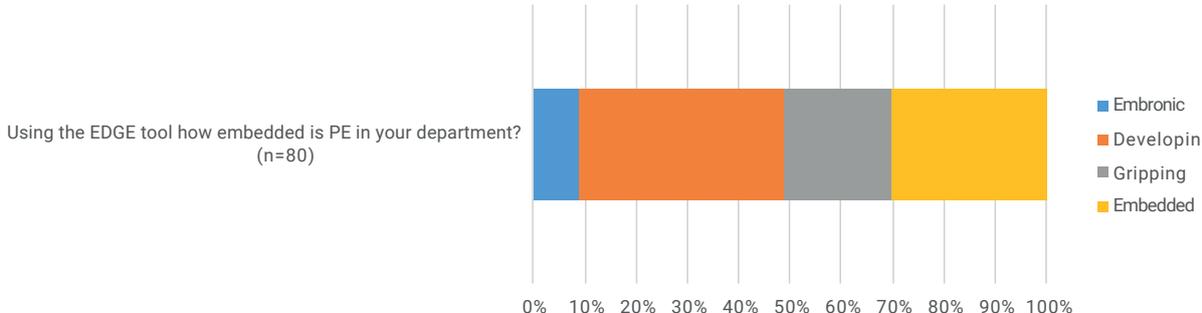


Figure 22. EDGE Tool engagement feedback

4 <https://www.publicengagement.ac.uk/support-engagement/strategy-and-planning/edge-tool>

We also looked at how the assessments from the EDGE tool broke down by career type (Figure 23). There is no big difference between the ratings from researchers and OPE professionals, only that OPE professionals have rated on average very slightly higher. The majority of those in the 'other' category have rated their institution as embedded (53%). This is interesting and may be due to the fact that many in this category sit in smaller organisations, such as charities and learned societies, where public engagement is embedded in the organisational structure.

got no department support. This is worrying for the sector in terms of embedding public engagement activity, as this can't become truly embedded when there is a lack of support at an institutional level.

Again we looked at how levels of reported support varied between career types (Figure 25). This was reasonably evenly split across career types, with Researchers having a slightly higher rate of representation in the some support category.

We also asked attendees how much support they got from their department for their public engagement activities. Figure 24 shows that most responded that they got some (55%) or plenty (38%) of support. However, 7% stated they

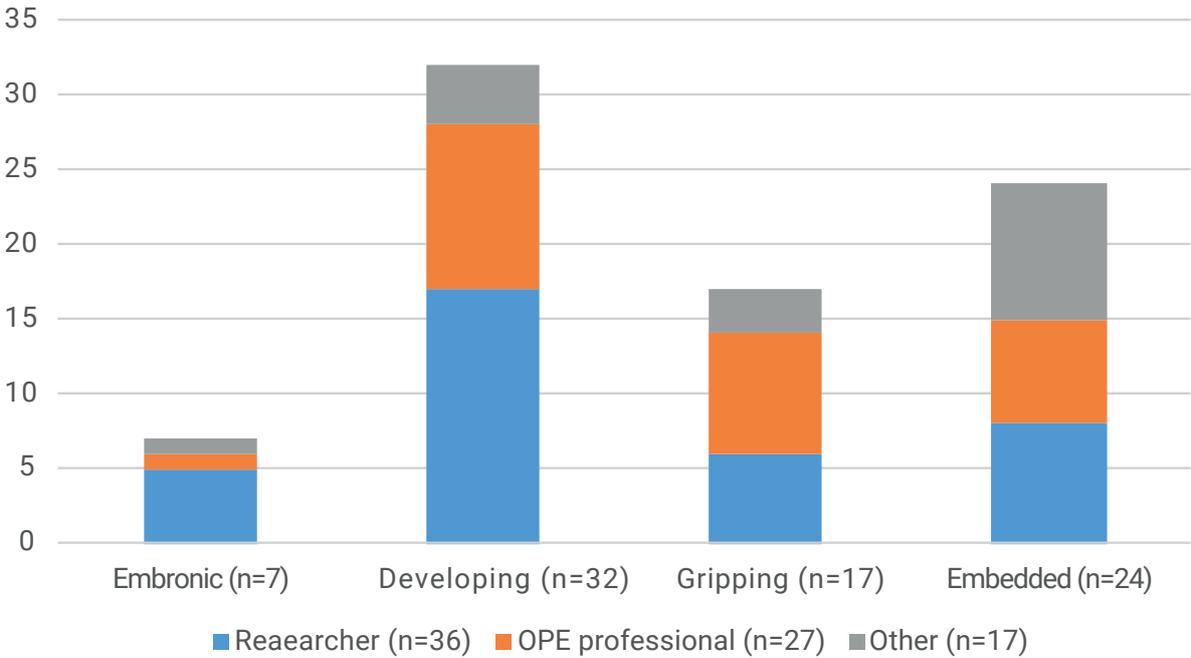


Figure 23. EDGE Tool feedback broken down by career type

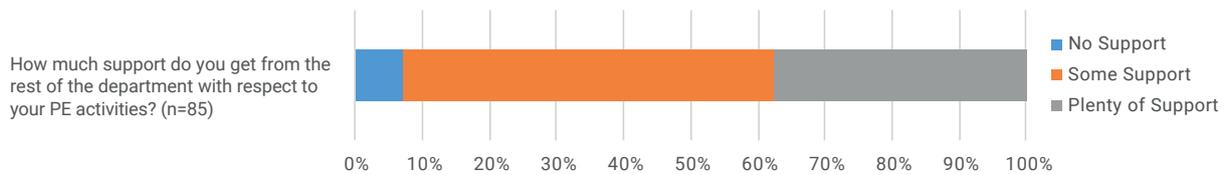


Figure 24. Departmental support for public engagement.

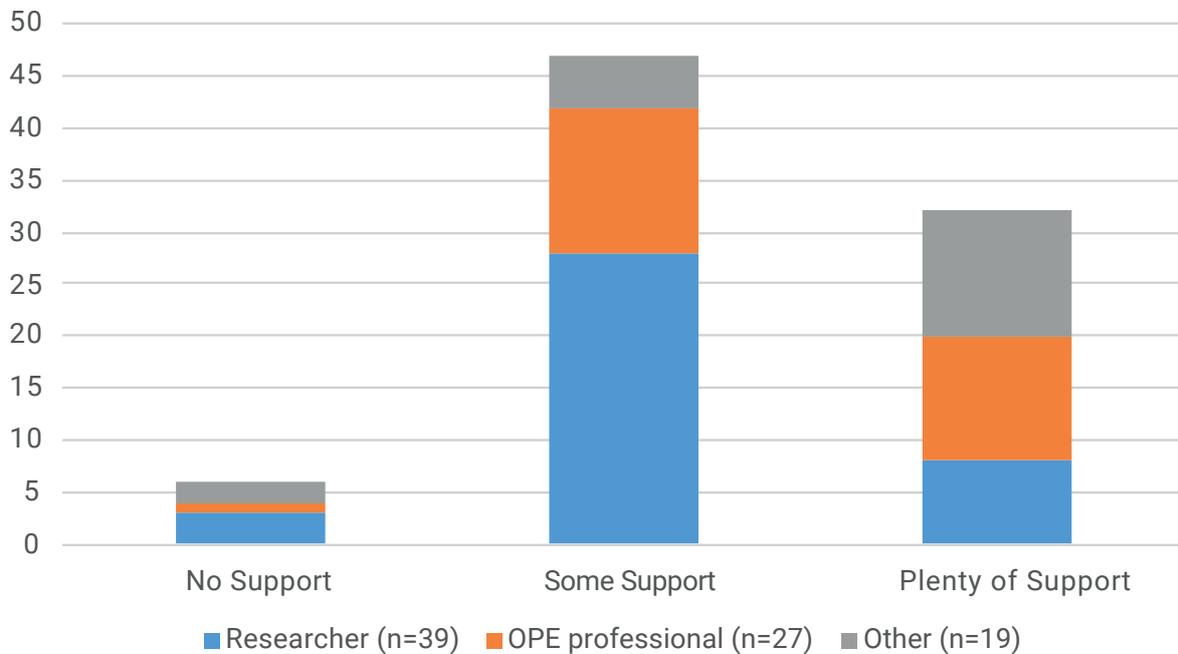


Figure 25. Departmental support split by career type

The Interact partners will continue to support the embedding of public engagement in institutions. This will feed into subsequent Interact symposia and help us identify how best we can be supporting the community.

We have recognised from Interact 2019 that a key driver for academics engaging with the engagement landscape is REF. The next Interact symposium, in September 2021, will be after the submission deadline for 2021 and we plan on using this as an opportunity to work with institutions to embed and improve their engagement practice from the start of the REF-able, period ahead of REF 2028. We acknowledge that this will not come without challenges, as many may have been motivated to attend Interact 2019 to help support and evidence submissions for REF 2021. We hope that since instigating the Interact symposia series we have helped to cultivate an engaged community that recognises the importance of engagement throughout their

work cycle, and that this will be demonstrated by those attending and contributing to the next Interact conference.

We continue to champion reward and recognition for public engagement within universities, and are committed to working towards public engagement work being universally valued. There are examples within the higher education sector of public engagement being recognised in promotion criteria, but we still have much work to do to get this practice embedded across the sector.

## Lessons Learned

### Summary and Recommendations

In summary, we feel that Interact 2019 built on the success of Interact 2017, it was timely, and holding the event bi-annually is currently working well. The day was successful, there was a fantastic atmosphere, and many commented that the opportunity to network and meet outreach and engagement professionals was valuable. In designing Interact 2019 we took into account the 2017 feedback to ensure this event was better for all. Most of those changes we made worked well, and we have identified further improvements we can make for the next Interact. We acknowledge we didn't get everything right as some of the feedback indicates, however Interact is now an established event in the public engagement landscape.

Feedback on the event was generally very positive, the programme was full, and there was something for everyone. Some felt that more time was needed for networking breaks in between sessions to allow for networking and follow-up questions. We particularly note the feedback received on timings: there was some navigation required between buildings to locate different sessions spread across the campus. Although student ambassadors were invaluable in helping delegates find sessions, signposting with building names could have been improved and a more informative location map would have been useful in the delegate packs. Others indicated that the packed and wide-ranging programme was a positive feature, which added to the atmosphere

and strength of the event. It was the planning team's view that we wanted to support as many people to share their learning as possible, and that having diverse workshops was preferable to excluding some content. We are pleased to note that no session suffered from poor attendance, with even comparatively less popular sessions still having good audience numbers.

Networking was a key objective for many and feedback suggested we could have done more again to facilitate this by ensuring that lunch and transfer between sessions was accompanied by networking breaks. The marketplace was popular and was located next to the room in which a buffet lunch was served. Feedback indicated that some delegates felt that the lunch would have been better served in the marketplace area. For Interact 2021 we are currently in the process of securing a venue which has a large enough space to make this a reality. The evening reception before the symposium was well received and was a highly valuable networking opportunity.

Finally the crowd-sourced nature of the programme ensured that the content was both for and by the people attending. **Interact is owned by our community.** The Interact planning team also took time to debrief post-event and review the evaluation data to date. Overall the planning team were unanimous in agreeing how rewarding and enjoyable the day had been for them personally and professionally. We thank our lovely attendees and the support of our respective institutions/ organisations in collectively making Interact 2019 a success. Thank you!



## **We have a number of recommendations for those considering planning their own event**

### **Pre-Event Planning**

- Ensure that the aims and objectives of the event are clearly defined and agreed by all partners and members of the project group.
- Establish a planning group at least one calendar year before the event.
- Choose a venue that can easily be reached by public transport.
- Produce a written project plan with clear objectives, outputs and outcomes and a realistic timeframe.
- Ensure the venue can accommodate the event and there are enough syndicate rooms close to any plenary sessions.
- Ensure the event is timed not to clash with other major national or international events or school holidays.
- Have a written a partnership agreement to ensure responsibilities for different aspects of the project and contributions, whether in kind or financial, are agreed in advance.
- Meet regularly, including face-to-face meetings where possible, to update each other on progress and to make key decisions jointly.
- Collect all the information needed from attendees (ensuring GDPR compliance) as part of the registration process. Make sure you collect the correct permissions to share with organising partners.
- Prepare for accessibility requirements, and communicate what is in place before the event. Ask attendees on registration for any additional accessibility needs.
- Ensure the registration platform is compliant with operating systems that use firewalls to avoid e-mails going into junk folders.
- Provide as much advance information as possible regarding the event, venue and logistics on the day, including keynote speakers and themes.
- Recruit a large group of volunteers/helpers to assist on the day itself.
- If content is to be crowdsourced and/or voted on, ensure there is plenty of time to do this so the planning team can circulate the running order of the day to contributors for checking ahead of making this public. Agree a process for how crowdsourced ideas will be enacted, or not.
- Build in sufficient breaks in your programme for networking and getting from session to session.
- Consider environmental impacts and logistics of refreshment areas where possible.
- Carefully consider where best to market the event, particularly if you are hoping to attract specific/new audiences.
- Make sure all catering arrangements and dietary provision is made in advance of the event.
- Ensure that travel arrangements, instructions and maps and directions are sent to delegates well in advance of the event.
- Make sure that workshop rooms are clearly signposted and labelled with the time and name of the workshop.
- Collect all information from activity providers, including risk assessments and room requirements, in advance.

## On The Day

- Ensure signage to/from the venue is clear and appropriately placed, obvious and eye-catching.
- Ensure the registration desk has everything that delegates need for the day and a dedicated team on hand to answer queries.
- Meet with your volunteers/helpers at the start of the day with a clear written brief to ensure they know where things are and make sure they are clear on what is required from them.
- Ensure activity providers are provided with all the information and facilities they need in order to deliver their workshops.
- Ensure that workshop facilitators and activity leads have clear responsibilities in terms of chairing and keeping time.
- Include a housekeeping speech at the start of the day which covers all relevant information.
- Have specific plans and helpers in place to assist those with dietary requirements, luggage, access needs etc.
- Facilitate networking and interaction with the marketplace by encouraging attendees to mingle, and if possible host lunch/coffee breaks in the marketplace area.
- Ensure catering provision is clearly labelled and caters for all delegate dietary requirements.
- Ensure that technical support is provided throughout the event.
- Capture evaluation on the day and consider a post-event questionnaire.

## Post Event

- Debrief with your team to look over evaluation data and discuss what went well and what didn't (including from the team's perspective).
- Thank attendees, volunteers and helpers and anyone else who played their part in making the day a success.
- Keep people informed about what they can engage with next by providing 'action points' such as information about funding opportunities or other events.
- Share learning and best practice with others from the sector through case studies or post-event reports.
- If hosting repeat events, be clear where feedback from previous iterations has helped shaped the current event.
- Follow up on evaluation to track the longer term impact of your event.



## Biographies:



### Robert Walsh

Robert is a professor of Solar Physics in the Jeremiah Horrocks Institute at the University of Central Lancashire, Preston. Currently he is an STFC Leadership Fellow in Public Engagement, focusing on working with low science capital audiences in Blackpool, Lancashire. Recently, and working with artist Alex Rinsler, Robert created the art/science installation called SUN, a seven-metre diameter suspended sphere, internally projected with images from NASA's Solar Dynamics Observatory. Robert is the UK National Outreach Coordinator for the International Astronomical Union and an onorary life member of the Royal Institution. Working with the Ri, Robert helped create the Ri-UCLan Young Scientist Centre on the Preston campus.



### Olivia Keenan

Olivia is Director of Outreach and Public Engagement at the South East Physics network. She leads the network's outreach programme and public engagement work. SEPnet work with schools to improve accessibility to, and uptake of, physics. They support their partner universities to engage diverse publics on the research they are conducting. Olivia is passionate about equality and representation in STEM and enjoys working on projects which help embed social justice in STEM subjects by removing barriers to access.



### Rosemary Teague

Rose works at the Institute of Physics as the Outreach Network Coordinator, ensuring a high quality of public engagement within the Physics network across the UK and Ireland. She is developing toolkits and training to enable members to feel confident in their activities and get people thinking about the why behind their outreach or engagement project. She is also coordinating the next round of the IOP Public Engagement Grant Scheme.

### Amnah Khan

Amnah is an Ogden Trust Programme Officer with particular responsibility for the Teach Physics internships and the Ogden Outreach Officer programme. She is passionate about education, and physics in particular, and is excited about the opportunity to support students to benefit from research and teaching experience, and to support wider physics outreach.



### Sheila Kanani

Dr Sheila Kanani is a planetary physicist, science presenter, physics teacher and children's author, with a background in astrophysics and astronomy research from UK universities. Her experience includes acting as an ambassador of science, public speaking, events organisation, science journalism and school visits. Sheila is currently the Education, Outreach and Diversity officer for the Royal Astronomical Society

### Katayune Presland

Katayune is the Royal Society of Chemistry Education Coordinator for the North West and engages with chemistry and science teachers including teacher networks, keeping them up to date with RSC resources and providing support in the teaching of chemistry, including practical work. Katayune also engages closely with HEI's and Industry which includes Outreach departments and ITT (initial teacher trainer) providers. Her role involves sourcing what outreach activity chemical industries in the North West currently undertake with the aim to increase contacts between schools and industry.



### Neville Hollingworth

Neville is a public engagement manager at STFC. He has a variety of roles managing a number of strategic public engagement programmes and its implementation at National Level. Neville also manages the linkage of STFC's science and technology with the formal and informal education sectors and works with strategic partners and organisations to help deliver STFC's public engagement objectives.

### **Katherine Platt**

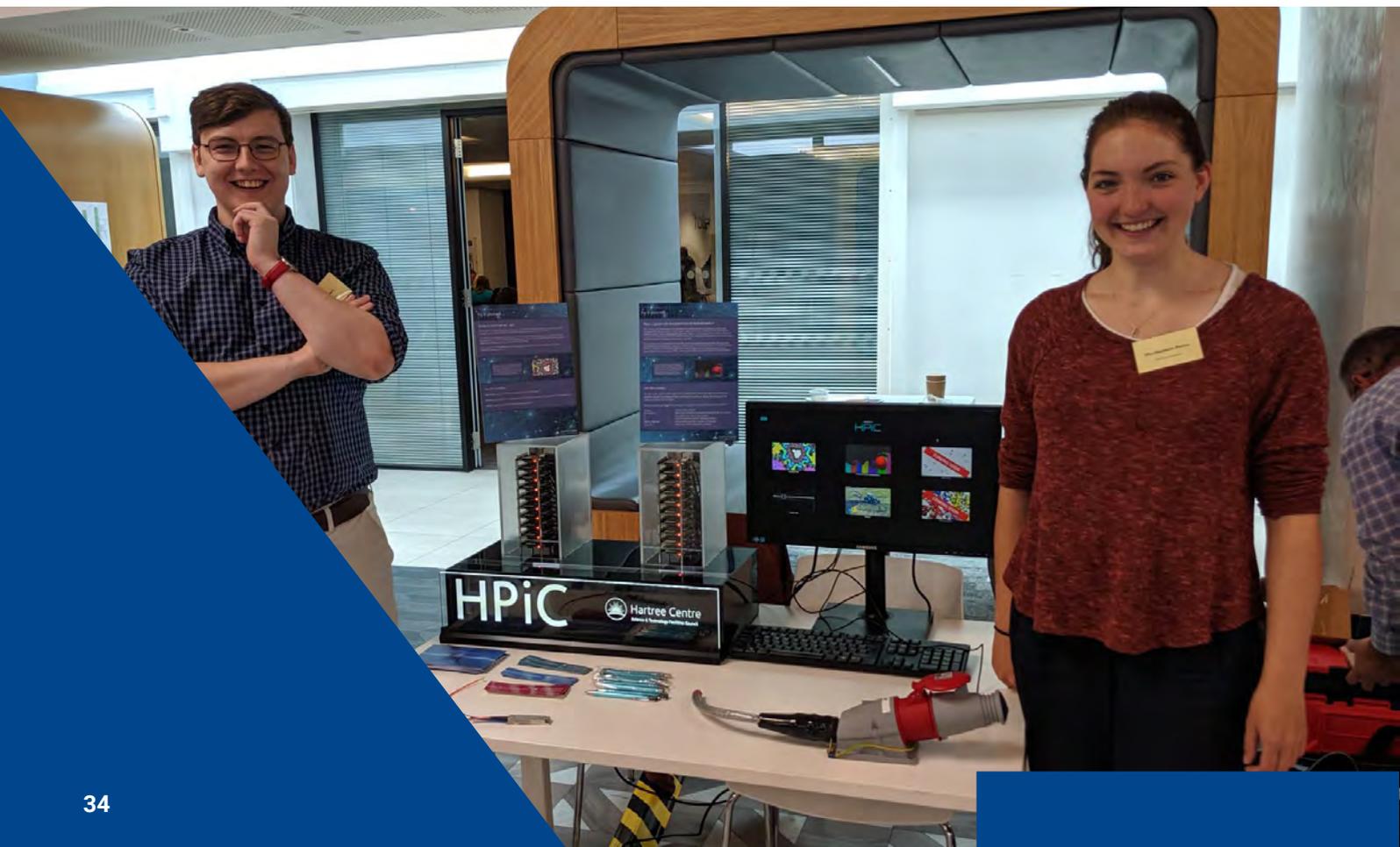
Katherine is the Institute of Physics' North West Regional Manager. Katherine supports the IOP's membership, develops and delivers public engagement projects, and works with business and policy makers to make physics accessible for all.

### **Nicky Bladen-Hovell**

Nicky joined PPARC in 2004 and moved to STFC in 2007, where she is a programme coordinator in the Programme Support Group. She brings a wealth of knowledge and experience as a meeting and event coordinator to support the logistical work of the Planning Group. She enjoys the challenges that come with organising events such as Interact and takes great pride in the detail of her work to deliver high standards of support and achieve positive outcomes at events.

### **Julie Gilbert**

Julie Gilbert currently works in the Programme Support group in STFC and has a significant experience and knowledge of working in other programmes to support the work of the Planning group.



# Annex A symposium programme



## PROGRAMME

4 SEPTEMBER 2019

University of Central Lancashire (UCLan), Preston, Lancashire, PR1 2HE

- Reaching underserved audiences
- Schools outreach
- Evaluation, impact and REF2021
- Sharing practice

09:30 Registration: workshop selection, Foster Building

10:30 Darwin Building Lecture Theatre  
**Welcoming addresses**  
 Professor Ian Allison – *Executive Dean of Faculty of Science and Technology, University of Central Lancashire*  
 Dr Derek Gillespie – *Head of Skills and Public Engagement, STFC*

10:45 **Plans for the day**  
 Professor Robert Walsh – *University of Central Lancashire*  
 Dr Olivia Keenan – *SEPnet Director of Outreach and Engagement*  
 Dr Neville Hollingworth – *Public Engagement Manager, STFC*

## MORNING WORKSHOPS

In this 2 hour session, delegates can attend their choice of workshops.

Room	DB254	DB247	Young Scientists Centre	HB003	HB015A	FLT2	FLT4
<b>Session 1</b> 11:15 - 12:05	Can I ask you a question?	Evaluating drop-in activities	Engaging with primary school students through local practical activities	How to change children's stereotypes of scientists + Shattering Stereotypes	Devising interactive meaningful activities in Public Engagement	Craigmillar community science partnership: working for and with an Edinburgh community	Examining the sector
<b>WORKSHOP, TRANSFER AND REFRESHMENTS</b>							
<b>Session 2</b> 12:15 - 13:15	How to get started in Public Engagement	Driving and sustaining engagement in our departments	SunSpace Art + Changing cosmic perceptions	How to undertake a programme of deep research based engagement with schools and evaluate it	'I'm a scientist' through a science capital lens	Breaking barriers – community university partnership	The interactions of multiple barriers to Science, Technology, Engineering and Maths (STEM)



Lunch: 13:15 – 14:30

MARKET PLACE EXHIBITS AND INTERACTIVES							
X Appeal	Mobile Planetarium	Institute for research in schools	Harry Potter themed physics activities	Faulkes telescope project	Astroboost project		YouTube Communication
Inquiry Based Science Education (IBSE) type activities	Improving science capital	We share the same moon	HpiC Hartree summer students	Computational games	Nature of light	Bioinformatics	SunSpaceArt
FOSTER BUILDING CORPORATE STANDS							
Registration Desk	IOP	RAS	UCLan	RSC	STFC		

## AFTERNOON WORKSHOPS

In this 2 hour session, delegates can attend their choice of workshops.

Room	DB254	DB247	Young Scientists Centre	HB003	HB015A	FLT2	FLT4
<b>Session 3</b> 14:30 - 15:20	Can I ask you a question?	Evidencing impact in REF 2021	The physics mentoring project	Communicating science to a visually impaired audience + Music & Mutation + Astrophysics for all	SunSpaceArt 'Make it to the Moon'	Science through story	Examining the sector
WORKSHOP, TRANSFER AND REFRESHMENTS							
<b>Session 4</b> 15:30 - 16:30	STFC's Wonder Initiative: help us shape our national programme	Hands on engagement: not one size fits all	Future places, space and faces	Embedding science within the art world	How to get started in Public Engagement	Creating a conversation	The interactions of multiple barriers to STEM

16:30 Darwin Building Lecture Theatre  
Learning Outcomes and Feedback  
16:45 Closing remarks and call to action

- Reaching underserved audiences
- Schools outreach
- Evaluation, impact and REF2021
- Sharing practice

# Annex B Code of Conduct

## Interact 2019 Code of Conduct

We value the participation of everyone at Interact and want it to be fulfilling and enjoyable for everyone, regardless of gender, gender identity and expression, sexual orientation, disability, physical appearance, body size, race, age or religion. We will not tolerate harassment in any form.

Registration to Interact 2019 indicates that you are willing to abide by this Code of Conduct. This is a private meeting and admission is at the discretion of the organisers.

Participants are expected to adhere to the following guidelines at all times:

1. **Act respectfully.** Harassment and sexist, racist, or exclusionary comments or 'jokes' are not appropriate at any time (including lunches and social events). Harassment includes verbal or physical abuse, offensive comments, sustained disruption of talks or other events, inappropriate physical contact, sexual attention or innuendo, deliberate intimidation, stalking, and photography or recording of an individual without consent.
2. **Behave professionally.** Interact 2019 should be a safe, comfortable, and professional environment. Participants should be courteous with the opinions of others and be mindful not to exclude anyone from discussions or work-related activities.
3. **Communicate appropriately.** All communication should be appropriate for a professional audience including people of many different backgrounds. Sexual, sexist or other pejorative and exclusionary language and imagery is not appropriate. Delegates must also ensure that they conduct safe, professional and appropriate online behaviour. The symposium organisers will treat unacceptable 'electronic behaviour', through social media and other means, in the same way as it would treat other unacceptable behaviours.

4. **Work collaboratively.** The diversity of our colleagues' backgrounds is an asset. We're all here to learn, share, and contribute. Fresh perspectives should be valued along with the voices of experience.

Individuals asked to stop any inappropriate behaviour are expected to comply immediately. Anyone violating these rules may be asked to leave the symposium at the discretion of the organisers. Any participant who wishes to report a concern or violation of this policy is asked to speak confidentially to the symposium organisers. An anonymous reporting form will be available here and should be sent to the organisation the delegate feels most appropriate:

SEPnet - [outreach@sepnet.ac.uk](mailto:outreach@sepnet.ac.uk)

IOP - [engagement@iop.org](mailto:engagement@iop.org)

STFC - [publicengagement@stfc.ac.uk](mailto:publicengagement@stfc.ac.uk)

RAS - [skanani@ras.ac.uk](mailto:skanani@ras.ac.uk)

RSC - [katayune.presland@manchester.ac.uk](mailto:katayune.presland@manchester.ac.uk)

Ogden Trust – [amnah.khan@ogdentrust.com](mailto:amnah.khan@ogdentrust.com)

UCLAN - [RWWalsh@uclan.ac.uk](mailto:RWWalsh@uclan.ac.uk)

Thank you for helping to make Interact 2019 a welcoming, respectful and supportive environment for all.

This code of conduct is based on the 'London Code of Conduct', as originally designed for the conference 'Accurate Astrophysics. Correct Cosmology', held in London in July 2015. The London Code was adapted with permission by Andrew Pontzen and Hiranya Peiris from a document by Software Carpentry, which itself derives from original Creative Commons documents by PyCon and Geek Feminism. It is released under a CC-Zero license for reuse.





