



Public Engagement in the Physical Sciences: what we can learn

INTERACT Physics Engagement Symposium, Thursday 14th September 2017, University of Birmingham.



Fine balancing act – can we strive to eliminate the notion that only professional science communicators can communicate science?

Photo credit Helen Towrie at the CLF

AIMS FOR THE DAY

- 1. Evaluation and impact:** How to do effective evaluation and demonstrate impact, sharing case studies, what worked for REF and what didn't. Looking forward to REF 2021
- 2. Reaching traditionally hard-to-engage and underserved audiences:** Working with the right partners, raising your skills and working with STEM influencers to reach low science capital audiences, talk on engaging the blind and visually impaired community with your research.
- 3. Schools Outreach:** How to work with young audiences and inspire them.
- 4. Sharing both good practise and a safe space for "what not to do's":** Understanding your audience, reflective practise and what constitutes high-quality public engagement

On Thursday 14th September 2017, several representatives from the Central Laser Facility travelled to the University of Birmingham to attend the INTERACT Physics Outreach Symposium organised by the Science and Technology Facilities Council (STFC, the Institute of Physics (IOP) and the South East Physics Network Outreach (SEPnet).

The aim of the event was to “cultivate a community within the physical sciences of practitioners who develop high quality and creative STEM engagement and encourage a culture of strategic and reflective practice, “whether you are a professional science communicator or a scientist who communicates.

Following a welcoming address from Professor Tim Softley (Pro Vice Chancellor of Research, University of Birmingham) and Dr Derek Gillespie (Head of Skills and Public Engagement, STFC), the audience was invited to attend their choice of over 30 different workshops throughout the day. These parallel sessions covered a variety of interesting topics ranging from Physicists' perceptions of engagement to organising large-scale engagement activities, targeting hard-to-reach and underserved audiences such as the blind and visually impaired and even a very entertaining confessions segment in which Dom Galliano (SEPnet) and Hannah Renshall (IOP) spoke about their most embarrassing outreach, public engagement and volunteer management mistakes. In the afternoon, attendees were treated to a plenary on 'engagement and your academic career' featuring a discussion between two well-known public engagement professionals; Professor Alice Roberts and Professor Jim Al-Khalili.

All-in-all this informative, enjoyable day provided the perfect occasion for physical scientists and professional science communicators alike to come together, network and share their experiences and tips. At a time when we are aiming to increase participation in STEM study and employment, this event could not have been better placed.

“There seemed to be a lot of emphasis on the distinction between being a professional science communicator and a scientist who communicates.”



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WISE WORDS FROM THE PLENARY DISCUSSION *Jim Al-Khalili and Alice Roberts*



Increasing the appetite for knowledge –making science appealing to all
Photo credit Helen Towrie at the CLF

“We don’t want academics to feel like just because there are a select few with *communicator* in their job title, that they should be the only people to communicate science.” Alice Roberts, Professor of Public Engagement in Science at the University of Birmingham.

Most would agree that not everyone should be communicating science. After all, it completely depends on how outgoing you are but an important message to convey is that there should be more people communicating science than those designated science communicating professionals.

We also need to say to universities that its okay for young academics to do public engagement, but that there should be more support for time management, ensuring that a fine balance is made between research and outreach. For *Jim Al-Khalili*, Professor of Theoretical Physics and Chair in Public Engagement in Science at the University of Surrey, the choice was an obvious one; “The way I see it is that you can either be a professional science communicator, which is a perfectly worthy career, go into science journalism, work in a museum, promote science policy to government etc. but no longer be an active academic researcher, or you can be a scientist who communicates. Personally, I didn’t want to give up on research and that is why I try and balance it 50:50.”

Credibility is also really important, as Jim advised, if you are a scientist who wants to take part in public engagement you need to establish yourself in the field, go to conferences, write research grants, for example, and develop your scientific credibility.

Perhaps unexpectedly, a theme that kept cropping up throughout the day was one of gender. In the UK, only 20% of girls study A-level physics with the science ranking as the 19th most popular A-level subject for girls in 2011. So why is this the case? Well for many, it all boils down to the belief that Physics is a subject for boys and that this stereotype is part of our culture, perhaps more so in the UK than in other European countries. *Alice Roberts*, Professor of Public Engagement in Science at the University of Birmingham believes that the right example needs to be set for future generations, “we need to keep our eyes open and strive to dampen down this cultural conditioning where possible,” says Alice. In a similar vein, she went on to question whether we can learn a lesson or two from how the female demographic of students studying Biology and Medicine changed between the 1950s and the current day. Can this be applied to the Physical Sciences?

The discussion certainly brought up a host of potential gender-related questions. For example, are more female students in co-educational schools turned off studying Physics because of being in a class surrounded by boys? Are they under more pressure from friends to study more conventionally “feminine” subjects such as the arts?

Many would argue that careers in STEM need to be described in terms of the personal characteristics required and WISE campaigns such as “People Like Me” emphasise that girls need to be able to self-identify that science is in fact for ‘people like me.’ For others, it is a lack of careers advice and female role models that are key contributing factors to this apathy. Girls only represent 21% of those taking degrees in physics, a percentage that hasn’t improved over 30 years despite our best efforts. Do we need to be thinking of new avenues and ideas? Where next?

“Why does it not click that it’s strange to have an all-male panel. It’s not like we’ve got lots of outstanding male scientists and we’re scraping the barrel for mediocre female scientists!”

Jim Al-Khalili, Professor of Theoretical Physics and Chair in Public Engagement in Science at the University of Surrey.



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REACTIONS TO INTERACT 2017



Jen Gupta @jen_gupta · Sep 14
As a shy socially-anxious person, I promise my fellow introverts that you absolutely can still do outreach & public engagement #interact2017



Kathryn Boast @Kathryn_EB · Sep 14
Had an amazing day at #INTERACT2017 - full of thought-provoking ideas and inspiring people! Thanks @PhysicsDom and co for organising 😊



Charlotte Thorley @cprthorley · Sep 14
A genuine desire for inclusion, involvement and engagement. Love this ethos for #interact2017



Sam Henry @g7vdj · Sep 14
An exhausting day learning about #engagement at #interact2017 Now to put it in practice at #CuriosityCarnival @TemplarsSquare on Saturday



Derek Gillespie @DAGillespie · Sep 14
This team did a fantastic job making #INTERACT2017 happen today. Congratulations, all! @PhysicsNews @unibirmingham @SEPhysics @STFC_Matters



AFRIS @AFRIS_UK · Sep 14
Fascinating insights on science outreach and public broadcasting from Professors Alice Roberts & Jim Al-Khalili. #interact2017

