

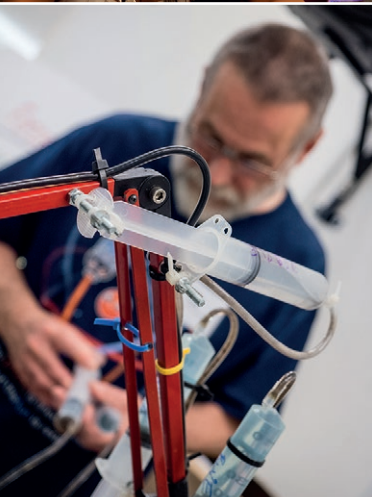
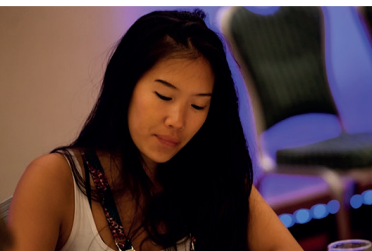


BIG Event

18-20 July 2018

Winchester Science Centre
and Planetarium

#BIGEvent18



PROGRAMME

The skills-sharing event for
people involved in the
communication of science,
technology, engineering
and maths

Welcome from BIG's Chair

Welcome to Winchester and to the BIG Event 2018!

Winchester Science Centre and Planetarium is a new venue for the BIG Event. 2018's Event has sold out faster than ever before and I've no doubt that's in part to the location. But the programme is also outstanding this year. There are sessions about diversity, storytelling, maths, audiences, social media and even taxes!

The membership of BIG continues to grow and we now have members from practically every conceivable area of STEM communication/public engagement/sci-comm. Our industry has grown and changed a lot since BIG was founded back in 1992, and BIG has grown and changed with it. As we're a members' organisation, it's important to ensure that we're meeting the needs of the members and we can only do that if you let us know what those needs are, so please get in touch if you have ideas for Skills Days or sessions at the 2019 BIG Event that you would like to see, or even better, would like to run!

This year we have more than 80 organisations represented; 150 delegates attending the whole Event as well as more than 35 folk who are just popping in for a day or two. I look forward to meeting as many of you as possible over the next few days. If you are new to the BIG Event, please do feel free to say hello to me or any of the Executive Committee.

Karl Byrne, BIG Chair 2017-18



A BIG thank you to our hosts

Working with a new venue can always be challenging, but the lovely people here at the Winchester Science Centre and Planetarium have been a joy. The venue location has presented opportunities as well as some challenges and the team here have been both friendly and helpful.

Special thanks go to Paul Cook and Emily Thorpe in the Commercial Operations team. They have been our go to people and have helped BIG get the most out of being in Winchester.

Thank you to Head of Curiosity Ben Littlefield and Head of Planetarium Mark Watson for their help in programming and with staffing.

And many thanks to the Chief Executive of Winchester Science Centre and Planetarium, Ben Ward, for inviting us to Winchester.

About BIG

BIG is a not-for-profit membership organisation – its ideas and activities are driven, developed and usually delivered by its 350 members. 1,000 people also belong to BIG-Chat, BIG's e-mail list – an active line of communication to exchange examples of good practice, air views, publicise events and news items and circulate job adverts in the field of STEM engagement.

The organisation's administration is carried out by a small band of tireless, dedicated and fabulous members who have volunteered to set up and run regional events. Finally, BIG charges two paid contractors to look after the members, organise larger events, support volunteers and promote BIG.

Look out for them around the Event – ask them what the Executive Committee does and how this work could benefit you.



James Bamford
Vice Chair



Ian Snell
Treasurer



Natalie Ford
Secretary



Andy Miah
General Officer



Sarah Keer-Keer
General Officer



Nicola Stock
General Officer



Lucy Moorcraft
General Officer



Sarah Vining
Membership Services Manager



Ashley Kent
Event Organiser

Your BIG Membership

Now you are a member of BIG you'll enjoy lots of lovely benefits, which include:

- regular UK-wide events and training courses.
- free entry to participating science centres and museums with your membership card.
- a quarterly e-newsletter featuring the latest news and articles, written by and for BIG members.
- access to extra information and resources in the Members' Area of our website.
- inclusion in our online directory of contractors, science centres, members, and their interests.



FAQ

Q: What's happening Wednesday evening?

A: Winchester is full of great pubs and restaurants, but none of them are large enough to contain a BIG Event social night. However, we'll post a list of recommended places on the event noticeboard, so recruit some friends, bring a few newbies with you, and explore the Winchester night life.

Q: Thursday evening dinner – where is it and do I need a ticket?

A: You don't need a ticket, but you do need to be on the guest list. You can find this on the notice board at the Reception Desk. If you can't see your name there and think it should be, please come chat to Ashley or Sarah. The dinner takes place at the Winchester Cathedral (9 The CI, Winchester SO23 9LS) from 7:45pm. The cash bar is open from 6:45pm. For more details, see page 13.

Q: Best Demo Competition – where is it? Can I compete?

A: The Best Demo Competition will take place following afternoon refreshments on Thursday 19th July, beginning at 5pm. Competitors are lined up in advance, but if there is availability, there will be a notice at the Registration Desk. You will be required to provide a Risk Assessment for your demo.

Q: Would you like me to share my photos?

A: Yes, please share them on Twitter using the hashtag #bigevent18 or share to our Facebook page.

Q: Delegate list – why haven't I got one?

A: Due to a thing called GDPR, we aren't providing a delegate list this year. However, as a member of BIG, you are able to access the Members' Area on www.big.uk.com and search the Big Membership Directory. If you want people to be able to find and contact you, make sure your BIG profile is up-to-date.

Q: Membership card – where do I get mine? How do I find out about my membership benefits?

A: Everyone attending the event is now a member of BIG and your card is in your delegate folder. If you have any questions about membership, please see Sarah at the Registration Desk.

Q: How do I get from Winchester city centre to WSC?

A: BIG is providing a FREE shuttle bus between the city centre and WSC. There are local buses and taxis, too. See page 19 for transportation information.

Please visit the Registration Desk so you don't miss any impromptu activities or changes.

At any time during the conference, you can call Ashley Kent with your questions on 07 929 789 727.



Winchester Science Centre



BIG STEM Network



**@bigchats
#BIGEvent18**

Wednesday 18 July

BIG Shuttle Bus		Winchester Marquee	Sun Room	Moon Room	Planetarium	Invention Studio	Exhibition Floor
11.45 - 2.15	11.00 - 1.00	Winchester Science Centre open - all welcome					
	12.15 - 1.00	REGISTRATION and COFFEE					
	1.15 - 1.45	Welcome and the Josh Award (Planetarium) followed by... The BIG Event Mingle (Winchester Marquee)					
	1.45 - 2.00						
	2.00 - 2.30						
	2.30 - 3.00						
	3.00 - 3.30	COFFEE Break (outside Marquee)					Laser Power
	3.30 - 4.00	Starting a Science Festival	Science + Art: The good, the bad & the potential	Putting the M in STEM	Sixty-Minute Social Media	Baptisms of Fire	
	4.00 - 4.30						
	15 min						
4.45 - 5.15	Science on the Spot	Body art & Tattoos in public engagement	Fractal Fun	How to get started in sci-comm	Minorities in STEM: So Far & What's Next	Science Outdoors	
5.15 - 5.45							
5.45 - 6.15	6.00 onwards	Enjoy one of the many pubs in Winchester. Check the noticeboard for recommendations.					



The Josh Award 2018

The Josh Award is an award established to recognise and support up-and-coming talent in science communication. The Award is inspired and named in memory of Josh Phillips who was the first Science Communication Officer at the Museum of Science and Industry, and Chair of BIG at the time of his passing.

The Award recognises a defining moment in the career of a science communicator; a person who is a practicing scientist or someone who has chosen science communication as their profession.

The 2018 winner, Matthew Allen (pictured left), will tell us more about it during the BIG Welcome, what he's doing and where it is taking him. You can find out more about how to apply in 2019 here: www.big.uk.com/josh.

Is your laser what it says it is?

Exhibition Floor • 3.00 - 3.30pm

It turns out that cheaper laser pointers are not always the power they say on the label, in frankly scary ways. We have a laser power meter, so you can bring along your lasers and find out whether you should be scared of them or not.

Dave Ansell – Director, Sciensell

Starting a science festival

Winchester's Marquee • 3.30 - 4.30pm

So, you're thinking of starting a science festival, and if you aren't, why not? In this session we will explore why you would go about putting yourself through the trauma of running a festival and what you can reasonably hope to get from it immediately and in the long term. Our panel will provide a number of case studies in different ways to go about running a successful and enduring festival. Come and get the inside scoop from fully independent events to those hosted by large institutions and learn from our mistakes and successes when you start your festival.

Marty Jopson – Founder and Chairperson Otley Science Festival, Yorkshire

Sam James – Founder Palace of Science, Newcastle

Dr Lindsay Keith – Director and Co-founder SMASHfestUK, London

Dr Jen Gupta – Director and former Head of Operations Winchester Science Festival

Science + Art: The good, the bad & the potential

Sun Room • 3.30 - 4.30pm

Working across STEM and the Arts is becoming increasingly common and popular, under the umbrellas of sciart, art-sci, STEAM and D-STEAM. But what makes a good science and art collaboration? What are the pitfalls or risks of collaborating across disciplines, or working across the arts and sciences as an individual? What potential collaborations are missing from the landscape? Hear a bit about our experiences and bring along your own experiences, examples and ideas for the future. This session is suitable for anyone interested in the intersection between the sciences and the arts.

Hana Ayoob – Freelance Events Curator & Illustrator

Paolo Arru – Associate Producer, SMASHfestUK

Sadie Jones – Outreach Leader in Astronomy, University of Southampton

Helen Cawley – Artist

Putting the M in STEM

Moon Room • 3.30 - 4.30pm

Maths and numeracy is often overlooked at Science Centres in favour of more classically dramatic sessions or workshops. In this exciting and interactive session, we will explore how maths has been stealthily and successfully incorporated in classic science centre activities at Winchester Science Centre. Join us to try out the activities, share ideas, and most importantly, to help us put the 'M' back into STEM.

Liz Mitchell – Education Officer, Winchester Science Centre

Sixty-minute social media

Planetarium • 3.30 - 4.30pm

A whistle-stop tour of social media in just one hour covering three main platforms: Twitter, Facebook and Instagram. Sarah Vining is an award-winning freelance marketing consultant and will share some practical tips about how you might use social media to engage more effectively with your audiences.

Sarah Vining – Marketing Consultant

Baptisms of fire

Invention Studio • 3.30 - 4.30pm

Training new science communicators can be an emotive topic. Not just on how to do it, but at what stage trainees should be brought into contact with an audience. We will share our experiences of taking students at varying levels and progressing them through the same programme. Within one day at the Big Bang Fair, trainees learn a script, manage elements of assisting a brief show and then lead the show. Hear about their experience and share your opinions and views from other training programmes.

Jon Wood – Byrne Outreach Fellow, University of Birmingham

Sarah Bearchell – Science Presenter, Sarah's Adventures In Science

Science on the spot

Winchester's Marquee • 4.45 - 5.45pm

Science Busking / Science in the Spotlight / Science Snacks, whatever you call it - Science on the Spot is an excellent way to communicate and engage everyone in science. Join the team from Glasgow Science Centre in this fun and interactive session where you can get hands-on and try out a selection of our 20+ Science on the Spot demos. This is perfect for those looking for some new exciting demos, those looking for help with risk assessments and method statements, and those who are looking to increase Science Capital within their organisation.

Chris Banks – Senior Science Communicator, Glasgow Science Centre

Jack Sargeant – Senior Science Communicator, Outreach

Amy Childs – Science Communicator

Body art, tattoos & engagement

Sun Room • 4.45 - 5.45pm

This is a hands-on workshop session where we will share our experience of using tattoos and body art to engage the public. The *Tattoo my Science* project uses temporary tattoos to start a conversation with adults and teenagers about cell biology research and the *Eurostem Cell* project used body paints to begin conversations about stem cells. Tattooing/ painting another person is quite personal/intimate and can give rise to rich interaction, conversations and trust. Get yourself tattooed and design your own tattoo! If it's sunny, we'll be outside.

Sarah Keer-Keer – Public Engagement Manager, Wellcome Trust Centre for Cell Biology, University of Edinburgh

Cathy Southworth – Centre for Regenerative Medicine, The University of Edinburgh

Maria Fanourgiaki – Public Engagement Assistant, Wellcome Trust Centre for Cell Biology

Fractal fun

Moon Room • 4.45 - 5.45pm

We believe that using captivating topics in mathematics in public engagement is crucial to improving public opinions of mathematics. In this workshop we look at fractals and introduce the topic using the coastline paradox with a hands-on activity measuring the coastline of Devon. In our scaffolded activity on the Koch snowflake, we invite the audience to show a key result from the coastline paradox using

mathematics. We have used this activity with a group of Year 9 students for our Royal Institution Masterclass and received very positive feedback. Links to all resources from the session will be available.

Lewis Roberts – Maths Teacher, EF Academy

How to get started in sci-comm

Planetarium • 4.45 - 5.45pm

How do you get that first job in sci-comm? Hear from people just getting started in sci-comm and how they did it. Early career science communicators will lead group discussions on how to get into your first few roles and give you an idea of the range of options open to you in sci-comm. You'll hear what it's like to work for a university, a STEM charity, a science festival and as a freelancer. A friendly session for newbies, by newbies!

Simon Moore – Communications Assistant, University of Leeds press office

Adam Penny – Freelance Science Presenter

Kirsty Hayward – Charity STEM Coordinator, Success For All (S4A) Learning Hubs

Paolo Arru – Associate Producer, SMASHfestUK

Minorities in STEM: The journey so far & what's next

Invention Studio • 4.45 - 5.45pm

Last summer, a small group of us channelled many of our frustrations and hopes into setting up Minorities in STEM, a network to support and showcase BAME individuals working and studying in STEM fields. One year on, join us for an open discussion about what's next for the network and how we can work with the science communication community going forward.

Hana Ayoob – Freelance Events Curator & Illustrator
Yolanda Ohene – Science Communicator & PhD Student, UCL

Jen Gupta – Astrophysicist & Science Communicator, University of Portsmouth

Sarah Cosgriff – Institute of Physics

Science outdoors

Café • 4.45 - 5.45pm

Bring along any good outdoor demos, and we can play with them and hopefully enjoy a beautiful July evening.

Rosy Ansell – Exhibit builder, Sciansell

Thursday 19 July

BIG Shuttle Bus		Winchester Marquee	Sun Room	Moon Room	Planetarium	Invention Studio	Exhibition Floor
8.30 - 10am	8.30 - 9.00						
	9.00 - 9.30	REGISTRATION and COFFEE					
	9.30 - 10.00	Let's be Original	Working with audiences with profound disabilities	Commissioning kit	Powerpoint and Keynote		
	10.00 - 10.30						
	10.30 - 11.00						
	11.00 - 11.30	Coffee Break (outside Marquee)					On the Spot (café)
	11.30 - 12.00	Outlandish truth and believable lies	P.E. Lessons	Taxes for the Self-employed	Planetarium: breaking news!	The Steady State Problem	
	12.00 - 12.30						
	12.30 - 1.00						
	1.00 - 1.30	LUNCH (Winchester Marquee) BIG AGM 1.25pm followed by the Beetlestone Award (Planetarium)					
	1.30 - 2.00						
	2.00 - 2.30						
	2.30 - 3.00	The tales we tell	Capital gains: Stories of (unexpected) connections with the underserved	Craft activities in STEM outreach	Best Demo prep Closed session	Imposter Syndrome in Sci Comm	
	3.00 - 3.30						
	3.30 - 4.00						
	4.00 - 4.30						
	4.30 - 5.00	COFFEE and snacks to tide you over to dinner (outside Marquee)					
	5.00 - 6.30	BEST DEMO COMPETITION (Planetarium)					
6.30 - 8pm	6.45 - 7.45	Cash bar and voting (Winchester Cathedral)					
	7.45 - 10.30	BBQ served from 7.45pm (Winchester Cathedral)					

Let's be original

Winchester's Marquee • 9.30 - 11.00am

Come along and try out the latest crappy demo or idea ripped off some generic website and transform it into something original. This workshop may help polish the beginnings of a routine or leave you covered in glitter... We aim to encourage the deconstructing of demos for reconstruction into routines.

Ken Farquhar – STEM Presenter, Inspirational Science Theatre Company

Neil Monteiro – Science Presenter

Working with audiences with profound disabilities

Sun Room • 9.30 - 11.00am

In the past, people with severe disabilities have often been exposed to little or no science content or skills. We want to share our experience of exploring science with people with profound disabilities in various settings. We will gently challenge assumptions around access and the engagement possible with STEM subjects. We will discuss some practical tips and resources for practitioners interested in being more inclusive in their practice and those interested in working specifically with this community.

Sarah Keer-Keer – Public Engagement Manager, Wellcome Trust Centre for Cell Biology, University of Edinburgh

Dr Sarah Bearchell – Sarah's Adventures in Science

Lewis Hou – Science Ceilidh

Ruth Perkins – science made simple

Commissioning kit

Moon Room • 9.30 - 10.30am

Buying or selling something custom, is by definition, difficult. You are trying to do something which has never been done before, which always involves risk. This will be a discussion session with a panel who have bought and sold exhibits and other kit on a variety of scales; see the process from both sides.

Dave Ansell – Director, Sciansell

Richard Ellam – Freelancer, LM interactive

Dan Bird – Exhibit Consultant, Whitefire Associates

Harry White – Science Centre Consultant, We the curious

Ian Simmons – Science Centres International

PowerPoint and Keynote

Planetarium • 9.30 - 10.30am

Many of us use PowerPoint and Keynote in presentations – but it's a blunt instrument to be wielded carefully. Let's get our heads together for some basic hints and tips (I didn't know it could do that!), do's and don'ts for accessibility and engagement, and some presentation hacks to get us all on top production values. Bring your opinions and share knowledge, and let's work out how (and when not to!) use digital slides for maximum effect. Katie Steckles will bring her Keynote experience, and Ben Sparks has the PowerPoint side (slide?) covered.

Katie Steckles – Freelance Mathematician, Think Maths

Ben Sparks – Freelance Maths Speaker, FMSP



On the Spot

Café • 11.00 - 11.30am

Most of the time we deliver material written in advance, practiced, run through forwards and backwards, thought carefully about or know like the back of our hands. But sometimes you're floored by a question, put on the spot in an unexpected space or passed the focus of a whole room as the supposed expert. Do you panic at the attention, or do you up your sci-comm game and rise to the occasion? Bring us your stories and be prepared to be put on the spot! Volunteer to be asked those questions that troubled others the most.

Ian Snell – Education Outreach Officer, Science Oxford

Noelle Aly – Tech Projects Officer (Maker), Science Oxford

Outlandish truth and believable lies

Winchester's Marquee • 11.30 - 1.00pm

Often there's a fine line between fact and fiction. Inspired by The Museum of Jurassic Technology and TV's *Would I lie to you?*, this session falls into two parts: Part 1) A cabaret performance from a host of presenters who will blur reality as they talk and demonstrate outlandish truth and believable lies. The audience will be challenged to detect the fakery. Part 2) A discussion of the role and responsibility of STEM communicators in a world filled with fake news, simplistic stories and laziness.

Matt Pritchard – Science Magician, Science Magic Shows

Ian Dunne – Science Presenter, Do Science Ltd

P.E. lessons

Sun Room • 11.30 - 1pm

How does engagement and communication work in universities and research institutes? Why are researchers doing it? What does researcher public engagement look like? How is it funded, and how are the impacts recorded? Big questions without easy answers. With the P.E. sector growing and departments increasingly recruiting from the sci-comm field, what can we learn from each other? Join three people who have moved

from one sector to the other who explore the issues facing engagement officers across the country and contribute your thoughts to the BIG knowledgebase.

James Piercy – Communications and Engagement officer, John Innes centre

Natalie Ford – Outreach and Public Engagement Officer, NDORMS, University of Oxford

Dr Nicola Stock – Public Engagement Officer The Roslin Institute, University of Edinburgh

Self-assessment taxes: A Q&A

Moon Room • 11.30 - 12.30pm

If you work for yourself, you must file a self-assessment tax return. Navigating this process can be a steep and daunting learning curve, but you aren't alone. Join your BIG peers to share experiences in self-assessment and hear from a newbie, a 13-year self-assessment veteran and a professional accountant. We'll cover record keeping, VAT, sole traders, partnerships, how not to freak out and ask: "Is it worth hiring an accountant?". We'll compile a useful list of top tips and best practice to take the tax out of taxes.

Ashley Kent – BIG Event Coordinator

Matthew Tosh – Freelance Presenter & Live Events Specialist

Eleanor Greene ICPA – Director, Do the Numbers Ltd

Planetarium: Breaking news!

Planetarium • 11.30 - 12.30pm

Planet 9 was discovered during your lunch break! Elon Musk has crashed his car on Mars! What now? This session will focus on the incorporation of new content at a moment's notice. In our field, things can change rapidly. How do you effectively communicate new insights or current events? We will focus on the use of the planetarium as a tool to communicate new information using existing visuals. Rise to the challenge and come up with your own creative solutions in responding to our ever-changing world.

Jorien van den Bor – Curiosity Officer, Winchester Science Centre

The steady state problem

Invention Studio • 11.30 - 1.00pm

Is science communication stuck in a steady state with limited career prospects? Are we losing or GAINING people when they go freelance? Should we be working harder to retain talent? What are the rewards and challenges of going freelance anyway? The panel will discuss topics such as: freelance roles from trainers to presenters to copy writers; long-term freelancing; the HEI 'takeover' of sci-comm; the mutual benefits of part-time freelancing and the creative freedom of entering freelance sci-comm.

Rowena Fletcher-Wood – Science Oxford and Freelance, Science Oxford and Freelance

Ken Farquhar – Freelance Science Presenter, Trainer and Lecturer, UEA

Marty Jopson – Freelance Science Communicator, TV presenter and science writer

Mhairi Stewart – Head of Public Engagement with Research, University of St Andrews

Katie Steckles – Freelance, Think Maths

Jon Chase, Freelance, Rap Science

BIG AGM

Planetarium • 1.25 - 2.30pm approx

BIG STEM Communicators Network operates as a not-for-profit organisation of members – a club, effectively; everything it does is to support the development of the science communication profession in the UK and beyond.

BIG's AGM is held during the BIG Event to give as many members as possible a chance to contribute: to have a grasp on what the Executive Committee has done for the membership over the last year and to help shape the next year or two.

Everyone welcome. Please bring your two-pennyworth. Find out what joining the BIG Exec Committee is all about and give it some consideration as something that could broaden your professional horizons.

The BIG Executive Committee 2017-2018

The tales we tell

Winchester's Marquee • 2.30 - 4.00pm

Science demonstrations are a staple for many science performers, however, the stories that surround them can be told in a multitude of ways and for a multitude of effects. By harnessing the power of narrative, you can link seemingly unconnected ideas, change perceptions or highlight different scientific aspects (all with the same kit!). Join us for an interactive session where we challenge you to find interesting angles, sideways looks, and revealing dissections of some of our favourite demonstrations.

Duncan Yellowlees – Director, Gleipner Ltd

Matthias Salewski – PhYsikanten Science shows

Matt Williamson – Freelance, Edinburgh Observatory

Capital gains: Stories of (unexpected) connections with the underserved

Sun Room • 2.30 - 4.00pm

If you're striving to influence the science capital of people from underserved audiences, then this is the session for you. We'll share our novel experiences, tumbleweed fails and unexpected successes from across a wide range of projects and settings. We'll invite you to share your own stories, examine our collective experience through the lens of science capital (including an adult index) and debate whether it has anything to offer in helping us diversify our audiences. We'll attempt to collate the root causes of our collective capital gains to further our chances of having the impact we desire.

Jen DeWitt – Senior Research Associate, UCL Institute of Education

Ben Littlefield – Head of Curiosity Winchester Science Centre

Josephine Wood – Audience Researcher, Science Museum

Renée Watson – Head of Explosions, WATS.ON

Farhana Chowdhury – Visitor Researcher, International Centre for Life

Craft activities in STEM outreach

Moon Room • 2.30 - 4.00pm

There are plenty of well-established craft activities people enjoy and lots of ways to incorporate them into STEM outreach. As well as a strong interactive hands-on activity to engage people, they can provide an intergenerational link to older family members with traditional skills, feature interesting STEM content in the maths/materials science they employ, and encourage people who might not otherwise consider participating in a science workshop. We'll present some examples of activities that have been used as part of STEM workshops and events and discuss what other types of traditional (and modern!) crafts can be used in this way.

Katie Steckles – *Freelance Mathematician, Think Maths*

Hana Ayoob – *Cheltenham Science Festival*

Takita Bartlett – *Takita Jewellery/STEM in Style*

Best Demo prep

Planetarium • 2.30 - 4.30pm

This is a closed session, just for Best Demo competitors to set up and for helpers to help. Strictly no peeking in here, please. If you're competing, you need to drop in even if you don't need any set up time.

Karl Byrne – *Chair, BIG STEM Communicators Network*

Ashley Kent – *BIG Event Coordinator, BIG STEM Communicators Network*

Impostor syndrome in sci-comm

Invention Studio • 2.30 - 3.30pm

Impostor Syndrome is the feeling that you are a fraud and incompetent, despite evidence that shows you to be skilled and successful. We've admitted feeling like this amongst ourselves – from sci-comm projects in a different scientific discipline to the one you came from, to working with experts in their fields that leave you desperately scrabbling around in your memory. In this interactive workshop we will look at how to recognise and deal with these feelings to help you combat the impostor.

Ellie Oakley – *Events Officer, Royal Society of Biology*

Ian Snell – *Schools Project Officer, Science Oxford*

The Beetlestone Award 2018

Professor John Beetlestone (1932-2017) was the founding director of Techniquet, the UK's first purpose-built science discovery centre. Set up in his honour, the Beetlestone Award* recognises "leadership and legacy in the field of informal science learning" and carries a personal cash prize of £500; an additional bursary to facilitate dissemination of the holder's vision and legacy and free registration for the next BIG conference.

The inaugural winner of this prestigious award is Stephen Pizzey (pictured right) of Science Projects Ltd and the Observatory Science Centre, Herstoncoex.

**This Award has been made possible through the generosity of The Beetlestone family and John's former colleagues and friends. Keep an eye on the BIG website and your inboxes to find out how to apply in 2019.*



Thursday evening festivities

The Best Demo Competition

Planetarium • 5.00 - 6.30pm

BIG members line up to compete for one of the least valuable and yet most highly prized honours in UK science communication.

The Best Demo Competition presents a light-hearted look at some of the demos you think are worth sharing with your peers. There's no money to win, it's not an Oscar, it's not a Nobel Prize. But within BIG we think it's worth winning.

Each competitor has no more than three minutes (and a warm and welcoming audience) to demonstrate the maths, science, engineering and so on that really lights their fire and they just can't help showing off to their peers. The audience decides. If you're in the audience, don't take it too seriously. If you're competing, take it seriously, but not too seriously.

Previous Best Demo winners...

1997	Wendy Sadler
1998	Derek Fish
1999	Chris Norton
2000	Gillian Pearson
2001	Gillian Pearson
2002	James Piercy
2003	Suse Brumpton
2004	Rob Copeland & Izi Mohammed
2005	Ben Craven
2006	Marcus Weber
2007	Ben Craven
2008	Diane Gray
2009	Ian Simmons
2010	Farrah Nazir
2011	Brian Macken
2012	Karl Byrne
2013	Marcin Chydzński & Błażej Dawidson
2014	Stephen Williams
2015	Matt Pritchard
2016	Tobias Happe
2017	Brian Mackenwells

Buses to Winchester Cathedral

6.30 – 8.00pm

The BIG Shuttle Bus (page 19) will run back and forth between the Science Centre and near the Winchester Cathedral to ferry people from the BIG Event to dinner. If you miss the BIG Shuttle, see page 19 for city bus and taxi information.

Best Demo voting and cash bar at Winchester Cathedral

9 The Cl, Winchester SO23 9LS

6.45 – 7.45pm

Freshen up before dinner if you like, but make sure you are at the Winchester Cathedral before 7.45pm so you can cast your vote for the Best Demo winner. A cash bar is available.

Dinner (and the Best Demo winner announcement!)

7.45 – 10.30pm • Winchester Cathedral

Enjoy dinner in the beautiful and historic setting of Winchester Cathedral. Fifteen centuries of English history lie behind this massive Cathedral which stands at the heart of historic Winchester, once the seat of Anglo-Saxon and Norman royal power, on the site of an early Christian church. Do you have a ticket to dinner? See page 4.

Friday 20 July

BIG Shuttle Bus		Winchester Marquee	Sun Room	Moon Room	Planetarium	Invention Studio	Exhibition Floor	
9.00 - 10am	8.30 - 9.00							
	9.00 - 9.30	REGISTRATION and COFFEE						
	9.30 - 10.00	ScoPPES update	Anti-doping lab for young and old	Engaging visually impaired people with astronomy	Empowering the audience			
10.00 - 10.30								
1.15 - 2.15pm	10.30 - 11.00	Coffee Break					Presenter Network (café)	
	11.00 - 11.30	Storytelling in a Science Setting	Training academics – what works (and what doesn't)?	Building a Diversity in SciComm Toolkit	That Which We Know: compiling the briefing for new science commers	Top Tips for Exhibits Designers and Clients	Taking Tech to the Trees (café)	
	11.30 - 12.00							
	12.00 - 12.30							
	12.30 - 1.00							
	1.00 - 1.30	LUNCH						
	1.30 - 2.00							
	2.00 - 2.30							
	2.30 - 3.00	Putting history back in science with the Robert Boyle Show	A Journey into DNA & Genomics – Eureka! and NHS	What's next for student engagement about the use of animals in research?	'Star Maker' – planetarium show	Gender Diversity in STEM	BIG Event Poem (café)	
	3.00 - 3.30							
	3.30 - 4.00							
	4.00 - 4.30	COFFEE BREAK						
	4.30 - 5.00					ISTATOY & Plenary		
	5.00 - 5.45							
	5.45 - 6.45pm	5.45 onwards	Event Closes - the designated pub for lingerers is posted at the Registration Desk					

ScoPPES update

Winchester's Marquee • 9.30 - 10.30am

Last year the National Forum for the Public Engagement with STEM funded a small project exploring the professionalisation of PE with STEM. At last year's BIG Event, Helen shared an update on the work and we spent some time developing some quality criteria for PE with STEM. Come to this session to find out the recommendations we made to the Forum, what's happened since with the Ri and what's next.

Helen Featherstone – Head of Public Engagement, University of Bath

Rachel Dorris – Clothworkers' Fellow in Mathematics, Royal Institution

Anti-doping lab for young and old

Sun Room • 9.30 - 10.30am

Join us for a talk about the two laboratory workshops we are developing to raise adolescent awareness about the growing use of image- and performance-enhancing drugs (IPEDs). One workshop is for the general public (with handheld centrifuge and fake bodily fluids) and the other is a fully developed workshop for schools, including group discussion and practical imitation of analysis methods used by the anti-doping laboratories. The workshop materials will be made available for all and your feedback and thoughts are most welcome.

Didier Le Lièvre – Educational employee, Technopolis

Engaging visually impaired people with astronomy

Moon Room • 9.30 - 10.30am

Want to engage with audiences that are visually impaired? The Tactile Universe team will train you on how to use our 3D-printed tactile images of galaxies to explain astronomy to a visually impaired audience and show you how to create similar resources for other areas of science and see how the Tactile Universe has evolved since last year's BIG event! We'll finish by being joined by the Tactile Collider team to participate in a panel discussion and offer advice on how to get started with communicating science to this community based on our experiences.

Dr Jen Gupta – Public Engagement and Outreach Manager, Institute of Cosmology and Gravitation

Dr Coleman Krawczyk – Tactile Universe Technical Lead, Institute of Cosmology and Gravitation

Dr Marieke Navin – Tactile Collider

Empowering the audience

Planetarium • 9.30 - 10.30am

Provoking emotion can be used to engage adult audiences with complex issues around science. Giving your audience agency can deepen their emotional investment. But does this work or is this emotional manipulation? In this session, watch a Rising Ape show about the future of artificial intelligence in the justice system, then explore and critique the use of emotion and audience agency in the show. Does it drive a deeper connection between the performers, the audience and the content? Are there downsides of utilising such a potent weapon?

Katie Cooper – Stakeholder Engagement Manager, Rising Ape Collective

Alison Cryan – Creative Producer, Rising Ape Collective

Tom Rodgers – Producer, Rising Ape Collective

The Presenter Network – the worth of sharing the good, the bad and the sometimes VERY ugly

Café • 10.30 - 11.00am

The Presenter Network is a local, national and international network set up for presenters to share best and worst practice. I believe there is a wealth of invaluable experience locked away within the presenting community that is best unlocked and shared through the Presenter Network. In this session, I would like to share how the Presenter Network has helped our members feel more equipped to deal with some of the biggest challenges we face as a community. I would like to explain how they too can get involved and even start their own hub if they would like to.

Liz Avery – Senior Manager: Astronomy Education, Royal Observatory Greenwich

Storytelling in a science setting

Winchester's Marquee • 11am - 12.30pm

A strong narrative, whether personal or fictional, is very engaging. Stories have an important role to play in science communication. The emotional hook draws the listener in. Stories can also provide a context for objects and processes being modelled in an exhibition and thereby increase engagement. We'll show how stories have been used successfully in our different venues and settings. We'll discuss what makes a good story and start crafting our own. With a little storytelling training, anyone can become a storyteller.

Jules Pottle – Primary Science Specialist Teacher and Storytelling Schools Trainer

Virginia Smith – Head of Learning and Visitor Services, Brooklands Museum

Susan Vickers – Public Engagement Executive, Royal Society of Chemistry

Claire Murray – scientist, Diamond Light Source

Training academics – what works (and what doesn't)?

Sun Room • 11am - 1.00pm

Training scientists how to engage: don't know where to begin? activities not quite hitting the mark? or got some great successes to share? Come with your burning questions, issues you want to discuss and things to share – we'll shape the session around your needs. We've all been training researchers for years and we want to share our top tips, how to cope when it all goes wrong, and how to get researchers to get involved in the first place.

Helen Featherstone – Head of Public Engagement, University of Bath

Wendy Sadler – Director, science made simple

Jon Wood – Byrne Outreach Officer, School of Chemical Engineering, University of Birmingham

Andy McLeod – Special Projects Manager, The UK Association of Science Discovery Centres

Building a diversity in sci-comm toolkit

Moon Room • 11am - 12.30pm

Join us as we feedback from the BIG Diversity Skills Day and discuss next steps. Find out what we mean when we talk about diversity, the ethics of monitoring diversity, the complexities of data collection and evaluation, having difficult conversations, how we can make sci-comm more inclusive, the difference between visible and invisible diversity and what we can learn from other sectors.

Hana Ayoob – Freelance Events Curator & Illustrator

Suze Kundu – Science Communicator

Sarah Cosgriff – Institute of Physics

Lewis Hou – Science Ceilidh

Jen Gupta – Astrophysicist & Science Communicator, University of Portsmouth

That Which We Know: compiling the briefing document for newcomers to science communication

Planetarium • 11am - 1.00pm

The Little Event is a useful crash course, but it's not the only resource newcomers need. Imagine a document which: * Captured the key jargon – and outlined what it all means. * Gave a potted history of the sector, the mis-steps, and where we are now.

* Outlined the different branches of science communication. * Introduced and described the key ideas from pedagogy, andragogy, design, museum studies, marketing... * Discussed STEM, STEAM and HAMSTER * ...and more. Let's write that document. Collectively. All at once. Join us for this self-describing hackathon session! Type like someone else's future depends on it!

Jonathan Sanderson – Senior Lecturer & Outreach Specialist, Northumbria University

Chris Snowden – STEM & Public Engagement Manager, Eureka! The National Children's Museum

More organisers / editors / contributors welcome!

Top tips for exhibits designers and clients

Invention Studio • 11am - 12.30pm

We have been working with product design students at the University of Gloucestershire to produce designs for an interactive exhibit for a small science centre in Cheltenham. After instigating a discussion about people's top tips for designing interactive exhibits on BIG-chat, we will continue the discussion in Winchester and share the work we have done with UoG so far.

Dave Watson – Operations Director, Cheltenham Science Group

Richard Ellam – L M Interactive Science Shows and Hands-On Stuff

Taking Tech to the Trees

Café • 11am - 12.00pm

Science Oxford are planning fresh approaches to take science outdoors by using technology to refresh some traditional STEM activities, engage the geeks and extend the learning beyond the outdoors bit. School visits are often short, so such techniques can be used to create permanent records (assessment), enable learning to continue after the visit and allow the creativity of the children to flow. We'll be armed with some free mobile apps we've used already. Come ready to head outside and to share your approaches and anecdotes.

Roger Baker – Outdoor Learning and Ecology Manager, Science Oxford

Sophie Batin – Education Outreach Manager, Science Oxford

Putting the history back in science with the Robert Boyle Show

Winchester's Marquee • 2.30 - 4.00pm

Telling the story of science as the story of discovery and struggles against the unknown brings science alive. It shows the creative process involved and the influence of science in the history of civilisation. The Calmast Team from Waterford (Ireland) has been weaving historical story into scientific communication for 15 years. The Robert Boyle Show presents the life and works of Irish-born Robert Boyle, one of the most important scientists of the 17th century. Join us for a costumed recreation of Boyle's experiments to tee up a discussion about why/where/when/how to weave history into a STEM presentation.

Eoin Gill – Director, Calmast STEM Outreach Hub, Waterford Institute of Technology

Cordula Weiss – Programme Manager, Calmast STEM Outreach Hub

A journey into DNA and genomics: Eureka! and NHS collaboration

Sun Room • 2.30 - 3.30pm

Eureka! The National Children's Museum and the Yorkshire and Humber NHS Genomic Medicine Centre have been working together to engage families in the science of genomics and the 100,000 Genomes Project. Come along to this session to explore Eureka's playful learning approach in designing the drop-in activities and how this was used to explore a hard and potentially tricky subject with a young audience. We'll also share the lessons learnt, the impact of the project and of course you will be able to have a go at the activities!

Chris Snowden – STEM & Public Engagement Manager, Eureka! The National Children's Museum



What's next for student engagement about the use of animals in research?

Moon Room • 2.30 - 3.30pm

How can we encourage students to develop and express their own opinions on the use of animals in science? Which activities work best to promote discussion and debate? The Babraham Institute has worked with Understanding Animal Research to develop and deliver student workshops for several years, however, as a signatory of the Concordat on Openness on Animal Research we are keen to explore new methods to inspire conversations – whether discussion frameworks, practical activities or longer-term projects. Join our interactive workshop to find out how we have approached this often-controversial topic and share your suggestions in our open discussion session.

Michael Hinton – Public Engagement Officer, Babraham Institute

Tacita Croucher – Public Engagement Manager, Babraham Institute

John Meredith – Head of Education and Outreach, Understanding Animal Research

'Star Maker' – how a cosmic philosophy planetarium show can introduce astronomy concepts

Planetarium • 2.30 - 3.30pm

A planetarium is a powerful space for storytelling. The 1937 science fiction novel-of-ideas 'Star Maker' by Olaf Stapledon inspired a 30-minute planetarium show which tries to marry a serious philosophical journey through a multiverse with creative music and visuals. What audiences might this speak to, and how might we build on such storytelling to communicate more traditional astronomy? Experience 'Star Maker' yourself and discuss how successfully the project puts an A in astronomy STEAM. Above all, relax in the comfy seats of Winchester's awesome planetarium before that long journey home!

Christopher Hudson – Planetarium Supervisor, Centre for Life

Michael Gandham – Manager/Creative Producer, Arcus Studios

Gender diversity in STEM: a different approach

Invention Studio • 2.30 - 4.00pm

Airbus is tackling gender diversity by developing an engineering model to simulate different ways forward. 'science made simple' are assessing the results of using role models in a science show; NUSTEM has been assessing the impact of gender diversity initiatives in local organisations; and a recent EU project called Hypatia has the vision of a European society where STEM is communicated to young people in a gender inclusive way. Join representatives from all four projects to hear about the latest results and discuss where we, as STEM communicators, can next focus our effort in solving this problem.

Rhys Phillips – Engineer, Airbus

Wendy Sadler – science made simple

Andy McLeod – UK ASDC / Hypatia Project

Jonathan Sanderson – NUSTEM

BIG Event poem

Café • 2.30 - 4.00pm

For the last three years I've written and read a BIG Event poem at ISTATOY (sometimes a little too long, ahem) and I thought this year it would be great to have a session on the last day where we write it together! Bring your inspiration and ideas, the moments you've captured and your creativity to weave and develop a piece of art to capture the moment. Be part of the BIG Event poem 2018!

Rowena Fletcher-Wood – Science Oxford and Freelance

I Saw This and Thought of You

Planetarium • 4.30 - 5.45pm

Back for the <i>n</i> year running, the session to end all sessions (because it's the last session): I Saw This And Thought Of You. BIG's equivalent of an open mic slot, this is where all the little things can be raised. Found a Thing you think everyone should know? Tell us here. Want to share your love of all things plier-related? You could do that. Have a pithy insight? Want to raise a question? Newcomer or old hand, there's an up-to-2-minute slot with your name on it. Sign up throughout the Event.

Jonathan Sanderson – Senior Lecturer & Outreach Specialist, Northumbria University

Getting around Winchester

The BIG Shuttle Bus

Winchester Science Centre and Planetarium is a bit far from the city centre, so BIG has organised a FREE shuttle to get you back and forth from Winchester city centre and WSC. The BIG Shuttle Bus will drive back and forth during each time period to ferry people from one location to the next. This bus will not run beyond the times listed below, so don't be late! Collections begin near the King Alfred Statue, The Broadway. Look for the name **BRYANT TRAVEL** in the bus window.

Wednesday – 18th July

11:45am – 2:15pm (collections begin near King Alfred Statue)

5:45pm – 6:15pm (collections begin at WSC)

Thursday – 19th July

8:30am – 10:00am (collections begin near King Alfred Statue)

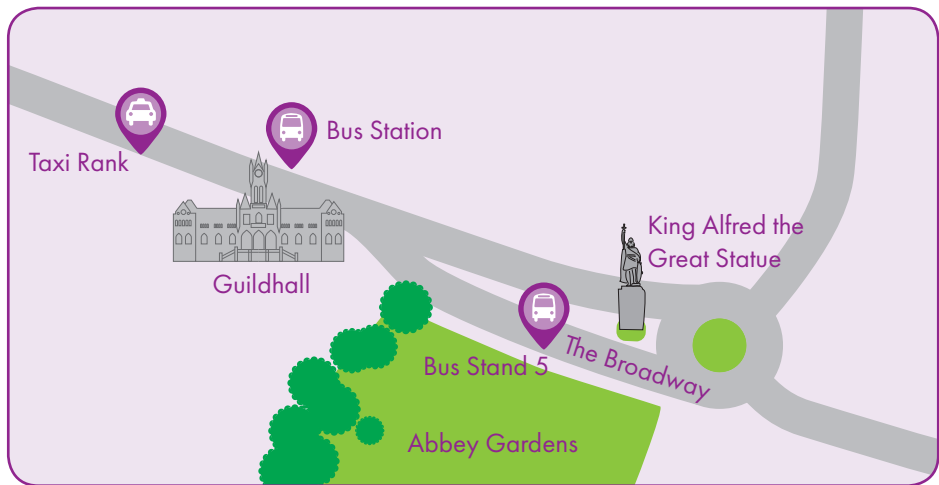
6:30pm – 8:00pm (collections begin at WSC)

Friday – 20th July

9:00am – 10:00am (collections begin near King Alfred Statue)

1:15pm – 2:15pm (collections begin at WSC)

5:45pm – 6:45pm (collections begin at WSC)



Stagecoach Bus

The No. 64 bus running between Winchester (The Broadway, Stand 5) and Alresford passes within 300 metres of WSC (at the bottom of Morn Hill). The service is half hourly on weekdays. Timetable available from here:

<https://www.stagecoachbus.com/>

Taxi

Available from the front of Winchester railway station; expect to pay about £8 one way. Also available from the front of the Guildhall and Tourist Information Centre. Call Wessex Cars 01962 877749/866208 or Wintax 01962 878727/878737. Both firms have taxis adapted for wheelchairs.



STEM Activities

To celebrate one hundred years of the Royal Air Force, the Institute of Physics and Historical Association have created a set of eight videos and resources that combine history and STEM.

Find out more and download free curriculum linked activities at RAF100schools.org.uk/activities or email education@iop.org for more information.

IOP
Institute of Physics

HA
Historical Association
The voice for history

