May 2016 saw the 25th anniversary of Helen Sharman’s trip into space and Imperial College London celebrated this alongside more than a dozen astronauts and huge groups of school children – both in person and online. The streamed event for schools was the first of its kind for the College’s Outreach team, and brought together numerous communicators and students from across the College – all excited by the opportunity to meet the European astronauts and Helen’s original Russian crew.

Dr Simon Foster from the Department of Physics presented ‘It is Rocket Science’ live to an audience of three schools, and the lecture was live-streamed, with numerous schools around the country tuning in to watch. To date the video has been watched over 1,100 times, and during the streaming, held over 50 concurrent views – among the largest Imperial has recorded for streamed lectures. This was followed by a Twitter astronaut Q&A where the Outreach team, researchers from the Space and Atmospheric Physics research group, the Imperial Space Society and other science communicators, worked in small teams with the visiting astronauts and cosmonauts to answer the questions posed by the schools.

The combined hashtags of #Sharman25 and #SharmanQnA made nearly 7m impressions on social media across the whole weekend of celebrations.

The Art & Science of Communicating Physics, continues on page 2
The Physics Communicators’ Group Prize celebrates early career researchers
Graham Farmelo (@GrahamFarmelo) describes his Ten Commandments of Communicating Physics

We were honoured to be joined by Graham Farmelo as the guest judge of our group prize award event held at the IOP on 21st November. Graham is the author of two of the most sensational historical popular science books, *The Strangest Man* and *Churchill’s Bomb*, and won the Institute’s Kevlin Prize and medal in 2012. In front of school groups, undergraduate scientists and researchers, four of the UK’s brightest sparks shared their stories of public engagement. Niamh, Euan, Helen and Chantal have engaged thousands of students through their talks, videos and games. Graham gave an incredible lecture on the art of communicating physics: why we should bother, where to turn for advice and how to impress different audiences. Group member Dr Jess Wade illustrated Graham’s talk. Here, Jess tells the story of how she came into science, and what led her to share her deep interest in it through her other passion, art. After Jess posted her graphic on Twitter, several people commented that the commandments could also be applied to other branches of sciences. Graham thinks “the communication of physics has special challenges, not least all the abstractions that are central to it”.

Graham says: ‘Niamh gave a superb presentation of her work, demonstrating her huge commitment to the art of engaging wide audiences with physics. The other three finalists – Euan Allen, Helen Cammack and Chantal Nobs – were also terrific and would also have been worthy winners.’

[Image of Graham Farmelo’s Ten Commandments of Communicating Physics]

1. *I keep it personal*
   
   You’re not going to give the perfect explanation with an interview in the乾燥 direction.

2. *Think carefully before choosing your angle*
   
   Many ways to tell a story, only a few good ones.

3. *Grab your audience, don’t let go, send them away thinking*
   
   (even one is all the work you’ve done).

4. *Narrative is all, be concrete, not abstract*
   
   People care about the extremely relevant, not abstracts.

5. *Focus on one message & delight with grace notes*
   
   Most people aren’t interested in details, most physicists are fascinated (quickly forget them) & know the answers (V). Source: Graham’s talk.

6. *Content experts help get it right - don’t be bullied*
   
   We live in a ‘post-truth’ world.

7. *Learn from high quality physics history*
   
   (physics existed before Newton).

8. *Put aside your first draft, review, revise, revise, revise*
   
   Feynman.

9. *Learn from great communicators (irrespective of field)*
   
   Real wise men are those who listen.

10. *Stick to time*
    
    [Image of David Attenborough]
Networking her way to the top: Niamh Kavanagh, University College Cork

Niamh won the Physics Communicators’ Group Prize Award in November 2016

I’m two years into my PhD, working in fibre optic communications and looking at the internet of the future. My aim is to build a communications system using new types of optical fibres to show that we can send more information, faster than we’ve ever seen, it’s pretty exciting stuff! I believe that while there is a need within society to create positive attitudes towards science, I think there also is a need within science to create positive attitudes towards physics. My goal is to give people, scientists and public alike, a positive impression of physics to counter the unfortunate stereotype that it can be “boring and difficult”.

Secondly, I want students, especially, to know that they can “fit in” in physics and find a career. Research from Science Foundation Ireland (the largest research funding body in Ireland) shows that 62% of students said fitting in was the number one reason they chose their college course. I want students to know that anyone, male or female, can fit in in physics. On top of that, the number two reason (at 56%) is career prospects; “what job can you get from physics?” is the main question we get at open days. I regularly visit schools to talk to students about studying and working in Physics. I try to engage with people on all different levels; I do Bubble Workshops in primary schools to teach them the physics of surface tension, I bring teenagers into the lab to show them we don’t all wear white coats and work with test tubes, I’ve written articles explaining my research to the public and during Science Week I was featured in a national newspaper.

In 2016, I was named the Irish Famelab champion. I often find that physics is underrepresented in these kinds of competitions, perhaps because you’re usually up against people who are trying to save babies or cure cancer! It can be really tough to make physics as relatable, emotional and impactful as these topics, so I was delighted that night when physics came out on top. Famelab opened up lots of avenues to keep communicating physics; my talks were played on national radio and because of this I was interviewed by websites and featured in an article about the ‘Future of Networks’ alongside CEOs of multinational companies like Nokia. Also, I was stunned when I was named on a list of 20 incredible women leading the way to scientific advancement. Only myself and one other physicist were mentioned, I was so proud to show people that physicists, and female physicists at that, are also leading the way to scientific advancement. I hope that any young woman reading this list will see that not only will she fit in in physics but there are exciting career opportunities ahead. Also, thanks to all this, my co-workers have seen the amazing benefits of science communication and I’m actively helping others to go out and talk about their work.

I plan to keep doing my best to give people a positive impression of physics by showing them it’s interesting and improving their lives and showing young people especially that physics is for all, if you’re interested you can fit in and find a career. And what’s even greater about all this is that I love it. When I was little, if I had known this was a “thing” I think it would’ve been my dream job. I heard about the IOP Early Career Physics Communicator award through a co-worker who encouraged me to apply... and I am so glad that I did!

“How is it that scientists know things, anyway?” Helen Cammack, St Andrews

I was asked this question by a member of the public at a science event, and I feel it’s very important for us to answer. What is a scientific theory? Why do scientists do experiments? Why do scientists disagree, and sometimes change their minds? These questions lie at the heart of public understanding of science. Most people will never be scientists, but an understanding of the scientific method is crucial when trying to assess claims in the media about climate change, GMO crops, vaccinations and other (often controversial) topics. I decided to help by making a short video, “What do scientists do?”, which explores the scientific method using the discovery of the Higgs boson as an example. To date, there have been over 5,600 views, including many from people who can’t or don’t want to go to a science festival.

Another really exciting project that I’ve been involved with is Cellblock Science, a year-long initiative to bring science to the inmates of Scottish prisons. The prisoners get fortnightly visits from scientists who host activities, experiments and discussions on a wide variety of topics. For example, I lead an interdisciplinary session about measurement in science, alongside psychologist Dr Kate Cross. I introduced some of the problems of measurement in the quantum world, where measuring an object’s properties can affect it. Kate talked about the problems psychologists face in designing experiments when people know they’re being experimented on, then the inmates discussed the concepts and shared their thoughts. It was so exciting to feel their enthusiasm, listen to their ideas and open up a real two-way conversation with them. I look forward to learning more from these and other audiences.

Helen even has some tips to making physics videos, which you can read on her blog.
He’s a Scientist - Get Him Out of Here! Euan Allen, University of Bristol

For somebody who spent four years studying physics in Manchester (the academic home of Prof. Brian Cox, and many other fantastic science communicators), I was surprisingly unaware of the wonders of science outreach and communication when I graduated in 2013. It was only a year later, whilst working at a science discovery centre in Cardiff called ‘Techniquest’, when I truly discovered the joy of communicating science. Sparked by the mad but fantastically curious minds of the kids coming to the centre, this is an addiction that has stuck ever since. Two years later and I can say that I am well and truly hooked. Cheltenham Science Festival, I’m a Scientist, talks with MPs, Q&A at theatres, school visits, vlogs, blogs, summer schools and research exhibitions, I have been a part of some magnificent events, and plan to do many, many more.

It was wonderful to cap this busy year off by attending the finals of the IOP Young Communicators Award in London. To even be considered of similar calibre to my fellow finalists was an award in itself. I learned lots from the event: everybody enjoys and deserves some interaction with science, regardless of their background or current situation; no matter how good you are you can always get better at science communication; and that you can even keep a 12-year old birthday party occupied with science if you are imaginative enough! If I was to add to these lessons myself for any budding science communicators out there, it would be this rather unoriginal and soppy cliché: never forget why you do it in the first place. Science outreach can be a lot of hard work (and boy do I mean a lot), but people really do get a lot out of it, and it can have a real impact on how people perceive science, scientists, and even their own future aspirations and potential. It’s also a heck of a lot of fun. This is something I always try to keep at the front of my mind on those long nights of outreach planning, or when I’m in a heap in the corner of Cheltenham Science Festival after nearly 12 hours of talking science.

From Soapboxes to Birthday Parties: Physics is FUNdamental Chantal Nobbs, University of Brighton

Physics can be enjoyed and appreciated by anyone, and this provides huge freedom to engage with different kinds of audiences in a variety of ways. My passion for outreach started when my younger brother came to visit me during my undergraduate placement at TRIUMF national laboratory (Vancouver, Canada). Despite the fact he had not had a single physics lesson at school at the time I was amazed at how easy it was to ignite an interest in nuclear physics research. This experience encouraged me to run regular tours of the lab for the public and local schools. When I returned to the UK to complete my undergraduate degree I involved in outreach exploded.

Most of my public engagement activities have been based in schools and colleges. I have delivered a number of talks about my research and helped to run a series of masterclasses encouraging students to consider studying physics at University. As a STEM Ambassador, I have provided a range of different workshops to schools, however I felt there was a distinct lack in physics-related activities on offer. To address this I have started creating a range of physics workshops to provide a hands-on activity for every part of the national curriculum, starting with “Physics of Light”. In this workshop students use different elements of the electromagnetic spectrum to solve a murder mystery. Beyond schools and colleges, I have organised and run my own stalls at Science Festivals providing interactive demonstrations. Earlier this year I volunteered to participate in the Soapbox Science London event. Standing on a soapbox on London’s Southbank without presentation slides or fancy demonstrations, I had to somehow draw in an audience from passers-by and explain my research in a way which was accessible to everyone.

In 2013 I created PHYSICS FUNdamentals to share scientific news stories and ideas for experiments to try at home. Through PHYSICS FUNdamentals I also provide science birthday parties, which involve messy experiments using household items so the children can safely recreate the experiments at home. All the children are provided with lab coats and goggles to reinforce the idea that they were a scientist for the day.

This is just a brief overview of the outreach activities I am involved with, and I plan to continue developing new workshops and events to share my passion for physics. My PhD supervisor, Professor Alison Bruce, encouraged me to apply for the Early Career Communicators Award, and I am glad I did because it has opened my eyes to even more opportunities and ideas for outreach. To anyone considering getting involved with public engagement I strongly recommend that you go for it, my only advice is that you do what you enjoy. It doesn’t matter who your audience is, or what kind of public engagement event you are providing, you will always be more inspiring if you enjoy what you do.
Oxford Road Community School: Making Space for Science  Mark Lyford,

Oxford Road Community School

Back in March 2015 all schools got a letter from a man called Tim Peake – not many people had heard of him then, but how things have changed! Like many educators I thought that his idea of involving pupils, primary in particular, with his ISS mission was a great one.

As the December launch approach and the momentum of the first Briton on the ISS began to build I decided to try and use this amazing opportunity to promote Space & Science at my primary school. My plan was to run an after school Space & Science Club. Not being a scientist this was a pretty terrifying thought. All I had was a load of enthusiasm and Twitter! Twitter is responsible for the birth and development of ORSA. I discovered that there was a Tim Peake Award Fund through twitter, I bombarded the STEM world asking for people to come in and run sessions for ORSA, I sent things we were doing to Tim Peake, NASA, ESA and many, many others. And after a while it really did work. I got physicists, engineers, meteorologist, space professionals and even an author to give up their time and come down to Reading and work with our ORSA

So I put in a bid to ESERO-UK Space Agency for funding for ORSA and was delighted when we were awarded the full £1000 award. This allowed me to be able to run ORSA as a high quality after-school learning experience for the 34 pupils that have been involved.

In the meantime ORSA invited applications from pupils in Years 3, 4 & 5 to join as ORSA nauts. We ran try-outs and had applications from over 50 pupils. On Selection was rigorous and on the 15th December, Tim Peake’s launch date, we ended up with 12 pupils who would be our Base Crew and 22 who would be Mission Crew. Base Crew would attend every ORSA mission session. The Mission Crew ORSA nauts would attend 2 or 3 of the 5 missions we had scheduled. Each mission was 4 weeks in duration. We decided on the following mission themes.

- Mission 1 SPEED & SOUND
- Mission 2 LIGHT & COLOUR
- Mission 3 STATES OF MATTER
- Mission 4 CONSTRUCTION & ENGINEERING
- Mission 5 METEOROLOGY

ORSA runs on Thursdays after school from 3pm until 5pm. A typical session involves a brief chat about science and space in the news, this has become very pupil led as the program has developed. Then there is an investigation or experiment, usually designed and led by our visiting professional. There is a great deal of hands-on science that takes place at ORSA. Then finally our ORSA nauts are encouraged to write a reflective journal on the session and post this on the ORSA blog. During our sessions our pupils have not only had the input of STEM professionals but have experienced a great deal of high-quality hands on science. Personally this has been the single most rewarding and enjoyable initiative I have been involved with in my time at Oxford Road – it really is a case of ‘if you build it they will come’.

Green Light for Future Women in Science  Kathryn Boast, University of Oxford

Kathryn Boast, a physics DPhil student from Oxford, visited Brussels for a day of workshops with young girls interested in science, hosted by ‘Greenlight for Girls’.

The buildings of the International School Brussels loomed out of the early morning darkness as we arrived to make the final preparations for a day of hands-on science fun. I was with some of the team from Greenlight for Girls (G4G), an international organisation dedicated to inspiring girls of all ages and backgrounds to pursue STEM subjects. The Brussels event is their largest of the year, based in their home city, and we were expecting over 270 girls aged 11-16 for four hours of workshops plus welcome sessions and a closing ceremony. I had been invited to run a workshop on behalf of Oxford Women in Physics Society, and was also hoping to see how the event usually runs in advance of the society hosting a G4G day in Oxford in February next year.

The girls began to arrive at 8.00 and they collected their trademark white G4G labcoats. On the tables in the foyer were sets of fabric pens for them to decorate and personalise their labcoats and as the day went on they could add to them more and more. I was busy preparing my workshop in one of the school laboratories, making sure it would all be ready for when the girls started at 10.00. I am working on a PhD in particle physics, and I love being able to give people a taste of what can sometimes be a bit of an intimidating subject. The plan was for the girls to make their own cloud chambers out of plastic cups, kitchen paper and tinfoil, and to use them to see cosmic rays. As we were setting up, the missing ingredient was some dry ice - unfortunately I couldn't bring it with me from Oxford! A volunteer was sourcing it that morning and bringing it up to the school, and thankfully it arrived in time.
for us to run a quick demo to finally check that everything should work.

Each workshop had around 15 girls aged between 11 and 16 drawn from in and around Brussels, but with a range of international backgrounds, as you might expect for the children of the centre of European politics and commerce. I had two volunteers on hand to lend assistance where they could, and keep an eye on fifteen sets of fingers and the dry ice. My workshop was advertised as being in English, but we still ended up with some girls who could only speak French or Flemish. Sadly my skills in neither language were sufficient to explain particle physics, so I was very grateful for my two fluent assistants!

The girls began the day with an opening ceremony that included exploring where other G4G events were being held, and meeting some inspiring women from Euroclear, who sponsored the day's labcoats. They then had two hours of workshops before lunch. Each girl had been able to choose which workshops she wanted to attend, so there was a guaranteed level of interest at the outset - though all of the workshops seemed to be exciting and engaging for everyone. I'd have loved to been able to try them all! There were a number of different companies represented at the event and running workshops. AIG were investigating virtual reality headsets, Stanley Black and Decker had a range of amazing tools to try out, Procter & Gamble were exploring the chemistry of cosmetics and making soaps - and there were many more. There were also a few workshops run by friends and associates of G4G, including making panpipes, developing photos in a dark room and extracting your own DNA, bringing the total number of workshops to 18 - organising all of these was no mean feat of logistics.

Two more hours of workshops in the afternoon brought the total number of girls I had worked with to around 60. It was exhausting but enormous fun. Every group presented different challenges, whether they didn't all understand English, or whether some arrived fifteen minutes late because they'd gone to the wrong place, or whether their cloud chamber for some reason just wasn't working. It was inspiring to work with girls who had so much enthusiasm and so many questions about what we were doing and how it worked. If all these girls choose to pour their energy into STEM subjects, then the future of science is in good hands.

Thank you to Greenlight for Girls for hosting my visit. Thanks also to the outreach team at Oxford University's Department of Physics for supporting the development of my workshop.

Physics and Film  Sam Illingworth, Manchester Metropolitan University

On the 16th November 2016, the Institute of Physics was involved in supporting its second science and film engagement event with the film charity Into Film. Following the success of a similar event in June 2016, this screening took place in Manchester's Odeon Printworks cinema, in front of a large audience of school children from across the Greater Manchester region. The audience were treated to a showing of the 2016 film Independence Day: Resurgence, followed by a Q&A with a panel of experts. These included Dr Neil Dagnall, a Reader in parapsychology at Manchester Metropolitan University and Monique Henson, a PhD student investigating the formation of galaxies at The University of Manchester.

The film is set 20 years after the original Independence Day (a fact which made me feel unquestionably old!), and follows the exploits of several of the original cast members (though notably not Will Smith) as they prepare to defend Earth against another alien invasion. Some of the science on offer in the film is... questionable, but overall the audience seemed to enjoy it, and there were certainly many questions for the panel, including the possibility of colonising another planet within our lifetimes.

The Q&A was recorded as part of Manchester Metropolitan University's science and film podcast The Neutrinos and Mutating, and a liver version of it can be heard here.

A big thanks to the Odeon Printworks Team, Into Film, our speakers and Manchester Metropolitan University, and especially to Tarah Patel from Into Film for helping to organise the event. Big thanks also to Neil Cochrane from Manchester Met for his sterling production work.

A third event is planned for the summer of 2017, and if there is any particular film that you would like to see screened and then discussed please get in touch!

An Oxford Spark  Jessica Boland, University of Oxford

Outreach is such a vital part of physics: if we want people to engage with all of the exciting research we do, we need to present it in an accessible and exciting way for everyone! Even more important is engaging people at a young age, to encourage them to consider studying science further and even becoming researchers themselves. Therefore, one of the main forms of outreach in Oxford at the moment is based on setting up hands-on physics demonstrations and exciting physics lectures for school students in the Oxfordshire area. One of my favourite events to be involved in was the ‘Physics of Light’ workshops to celebrate the IOP’s Year of Light - an interactive session focusing on all parts of the electromagnetic spectrum, the creation of a plasma in a microwave with a grape and making your own spectroscope.

Recommendations

Talks/ Events
10 & 25 January- XMaS Science Experience, Liverpool and Warwick
Please check your local branch calendar for weekly events!

Television/ Film
Hidden Figures, the incredible untold story of African-American women working at NASA (Katherine Johnson, Dorothy Vaughan and Mary Jackson), February 2017
The Entire Universe, December 26
Super Charged, Fuelling the Future: RI Christmas Lecture, BBC Four, December 26 - 28

Books
Dr Helen Czerski, Storm in a Teacup
Laurie Winkless, Science and the City, The Mechanics Behind the Metropolis
Dr Matin Durrani and Dr Liz Kalaugher, Furry Logic
Graham Farmelo, Churchill's Bomb
This created renewed enthusiasm for the subject in the students, who all thoroughly enjoyed the session!

Inspired by this, I have since been running physics demonstrations based around everyday technology and light for colleges around Oxford, as well as acting as the coordinator for the Early Academic Career Outreach Network. I currently also run ‘Inspiring Physics’ lectures for colleges at the University of Oxford and schools in the area, taking current research topics, such as metamaterials for invisibility cloaks and THz technology and explaining them in simple ways to get students to question how all the technology around them works. These lectures have been found to help students, in particular girls, gain the courage to study physics further. Their favourite part in the lectures was an exercise called ‘Guess the Physicist’, whereby photos of famous celebrities are presented who have at one point studied physics. It always surprises them just how many have and I have found that this is a key turning point in their decision to take science to a higher level.

Recent studies have also shown that the key thing deterring students from wanting to become researchers is the stereotypical view of physicists, as old professors who look like Einstein! Outreach events do inspire students to study physics further and also help to engage families, creating the opinion that science is vital and exciting, yet they are still put off by stereotypes. To show them how unrealistic this stereotype is, I am currently developing a podcast series with Oxford Sparks to look at the person behind the scientist. The podcasts will consist of interviews with physicists at various stages of their career, a simple overview of their research and then fun questions about them, such as what they wanted to when they were 5 years old and what equipment they would take if stranded on a desert island. It promises to be a fun series aimed at school students and undergraduate students, so please look out for it!

**A Circle of Life**  
Sam Illingworth, Manchester Metropolitan University

Science Club at DGS is for everyone, from the new Year 7s to the oldest of Year 11s. Every week, all year round, we are offered new opportunities to have fun whilst learning. From potato guns made from pens, to the sparklers that burn ever so pleasantly you never know what Dr Nickerson has got up her sleeve. One day you’re making square bubbles and the next it’s raining golden crystals in a glass beaker. Science Club at DGS is overflowing with surprises.

I will never forget the memorable times I have experienced with my friends. The look of relief on my friend’s face as she tore open the little our egg-drop challenge was worth more than a million pounds.  

**Manpreet Thakur, Year 9, Didcot Girl’s School**

This poem created renewed enthusiasm for the subject in the students, who all thoroughly enjoyed the session! The shape of this poem was created using a tool provided by Festisite.

**Science Club at Didcot Girls’**

This is a shape poem, inspired by recent research that found the roundest object ever observed in nature to be a distant star called Kepler 11145123.

Stars are not perfect spheres, as the centrifugal force that is created as they rotate forces them to oblate (i.e. flatten at the poles). The faster the star rotates the larger this force and thus the less spherical the star. Our own star, the sun, rotates with a period of 27 days and has a radius at the equator that is 10 km larger than at the poles. However, when you consider that the sun’s radius is 695,700 km this represents only a very small flattening. The flattening of a star’s shape is found by dividing the star’s radius (R) by the difference between the radius at the equator and the radius at the poles (R), which for the sun gives a value of $R/R = 0.00001$.

The researchers then looked for a star that was even more slowly rotating than the sun (the study of the oscillations of stars is called asteroseismology) and found Kepler 11145123, a star which is approximately 5000 light years away from the Earth. This star is over twice the size of the sun, with a radius of over 1.5 million km, and rotates three times more slowly, with a rotation period of 100 days. This star was thus found to have a difference in radius between the poles and the equator of only 3 km, giving it a flattening value of 0.000002 and making it the most spherical object in nature that has ever been discovered.

An audio version of this poem can be heard [here](#). The shape of this poem was created using a tool provided by Festisite.
**Engineer Our Future** Jess Wade, Imperial College London

Engineer Our Future was a Royal Academy of Engineering Ingenious Award winning event held at Imperial College London on 24 & 25 September, 2016. Over 50 students attended from 16 different state schools across London. Over the weekend the girls were presented with global engineering challenges, taught how to program by Imperial College students and graduates, then set-to-task in developing app-based solutions. The girls met many inspirational women working in STEM from across the scientific community, and they immensely enjoyed the opportunities to network with professionals and hear from current university students. The girls were never in front of a screen for too long: from campus tours, to hands-on water filtration workshops, to improvised comedy, this was a hackathon like no other. Anne-Marie Imafidon, head STEMette, hosted a panel discussion, where parents and girls heard from women working in range of engineering disciplines. The girls’ parents and teachers were invited in for a morning of technical sessions and discussion before watching their daughters took to the stage to present their incredible solutions. From a 300-person cake shaped like the Shard to a video game that helped map deforestation, this was a weekend no one will ever forget.

Don’t listen to me though, here is what two year 11s have to say: Shoumiya, Mill Hill County High School- “I am extremely grateful to have had this opportunity, and cannot overstate how beneficial it was in improving my skills in coding and developing my interest for it.” Nicole Ho, Hendon School- “It was incredibly exciting to gain an insight into the careers in engineering, as well as the coding behind the life-changing technology that will surely shape our lives and the future of our planet.” Read more here.

**Committee Changes**

We welcome Dr Jess Wade and Alex McDowell to the Physics Communicators Committee.

Jess has just finished her PhD at Imperial College London, where she worked in the Centre for Plastic Electronics. Jess is particularly focussed on the recruitment and retention of young women to science. To this extent, she works with the STEMettes, Women in Science and Engineering (WISE) campaign and Women’s Engineering Society (WES). She also works with the Institute for Research in Schools, who aim to bring authentic scientific research to the school laboratory.

Alex spent 20 years writing press releases for the London & SE Branch of the Institute of Physics. When he started, in the days before email, he hand-wrote press releases and sent them to his parents to type up. Alex recently cycled to Copenhagen to protest against research and education funding cuts. See here for more info: universitypost.dk. Alex has been a member of the Physics Communicators Group since it was founded by Averil MacDonald - the one who introduced Alex to press release writing, in 1995.

Read more about Detective Dot here.

This newsletter is also available on the web and in larger print sizes. The contents of this newsletter do not necessarily represent the views or policies of the Institute of Physics, except where explicitly stated. The Institute of Physics, 76 Portland Place, W1B 1NT.

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