

# GRADnews

NEWS FROM THE SOUTH EAST ENGLAND PHYSICS GRADUATE SCHOOL

Issue 4: Winter 2016

## Public Engagement

Welcome to the latest GRADnews newsletter. In this issue we'll be highlighting Public Engagement based on research. If this is the first time you've heard the term, don't panic! Public Engagement describes the many ways you can take your research and share it with the public. It's a two-way process with many benefits to both you the researcher, and the public.

Benefits to you include improving skills which are in high demand both in industry and in academia such as leadership, communication, listening, partnership working, and project management.

It also allows you to think about your research from a different perspective resulting in clearer thoughts and new ideas. Plus, if you can share your research with your Grandmother, you can explain it in your viva!

Examples include, but very much not limited to, public talks, blog posts, discussion events, art / science collaborations, stand-up comedy in pubs, growing a public garden, and simply standing on a box in a street corner.

This issue gives examples of some projects carried across the different partners at SEPnet. We hope this inspires you to think about what you could do with your research and who you could share this with! For more information, along with more details about how SEPnet can help, check out [www.sepnet.ac.uk/public-engagement](http://www.sepnet.ac.uk/public-engagement)



Dominic Galliano,  
Director of Outreach  
SEPnet  
@PhysicsDom

## Reflecting Photonics

A garden show may not be the obvious place to introduce photonics to the general public. The adventure started when the Royal Horticultural Society announced that the 2015 International Year of Light would be celebrated with a special garden category in its annual Tatton Park Show.

Elks-Smith Garden Design, an award-winning Hampshire landscape designer, took up the gauntlet and approached the University of Southampton's Optoelectronics Research Centre (ORC) to make a garden worthy of the challenge.

A masterplan was drawn up to share with the public the ORC's world-leading research into light-transmitting optical fibers. Fiber optic glass drops were set into the floor and a waveform path echoed light reflection along the fiber. The trees and plants were in cool shades, building to a vibrant spectrum. On the day, my team's role was to guide the visitors and unravel the intricacies and the deeper significance of the abstract photonic features of the garden.

Over the festival's five days, the IYL gardens at Tatton Park were on show to over 70,000 visitors, most of whom knew little about optical-fibers beforehand!

Our green fingered adventure featured on local and national news, press and television, including the BBC's Gardeners' World, introducing photonics to an estimated three million spectators. The undertaking was well appreciated and perceived;



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our garden won the Royal Horticultural Society People's Choice Large Garden award.

Taking part in this project improved our team's ability to communicate our research with people from a wide range of backgrounds and interest. It also improved our confidence in public speaking. We even learnt some basic horticulture and now know the difference between a Hydrangea 'Early Sensation' and a Verbena Bampton!

**Matt Posner, 3rd year PhD student  
Optoelectronics Research Centre,  
University of Southampton**

### **The successful encounter of Physics with Faith**

What do Science and Religion have in common? Is it possible to engage with both viewpoints of Physics and Faith in a meaningful way? Can Faith be used as a hook to engage with those who normally wouldn't be interested in Physics?

Our team here at St Mary's, a SEPnet associate partner, was awarded an IOP Public Engagement Grant in 2015 to explore these ideas. We organised a series of events consisting of talks delivered by our physicists and theologians followed by an informal audience-led discussion.

The first two events were held at St Mary's with the final event held at a Catholic parish in South London.

The audience at these events was broad, from A-level pupils studying philosophy or physics to clergymen and active members of local parishes.



Most of the audience had never attend a science event before and found faith a safe medium to explore complex concepts such as the Big Bang theory and quantum physics through more familiar concepts such as creation and human consciousness.

These events also helped to dismiss the misconception that physics and faith do not have anything in common and that physicists are always atheists and dismissive of faith.

Our goal of inspiring and enthusing Christian communities' and demonstrating there are concepts in physics that needed some leap of faith was a challenge but the feedback was excellent showing we had been successful. This has encouraged us to start new series of Physics and Faith in 2016.

**Elisabetta Canetta, Senior Lecturer in Physics  
Ali Mozafari, Visiting Lecturer  
Physics, St Mary's University,  
Twickenham, London**

### **SEPnet 2015 Public Engagement Awards**

My favourite event from last year was hosting the SEPnet Public Engagement Awards. Here we got to celebrate and reward physicists from across the region who have carried out some amazing Public Engagement projects over the last few years. The best thing about the award was that it's a chance to show how varied Public Engagement can be! Each of the winner also received £100.

The first category was the Newcomer Award. This award is given to those new to Public Engagement. It has been won by PhD students and post-docs over the last few years. The winner was Dr Jillian Scudder (Sussex) due to her amazing work on her blog. Flip over the other side to find out more!

We also awarded Michael Tarr (Portsmouth), a third year PhD student, with a Highly Commended in this category for his amazing work supporting all sorts of Public Engagement projects in his department. The panel recognised



that Public Engagement isn't only about the presenting, but all of the behind-the-scenes work too.



Other awards given out that night included the Communications Award to Prof Monica Grady (The Open University) for her work communicating her research including the Philae landing. In this category, a Highly Commended was awarded to Dr Karen Masters (Portsmouth) for her ongoing projects communicating her galaxy evolution research.

The Achievement Award was won by Prof David Berman (QMUL) for his ten years of carrying out extremely varied Public Engagement projects.



A highly commended was awarded to Prof Andrew Norton (The Open University) for his long-term helping out with many BBC / Open collaborations amongst many other projects.

Finally the Innovation Project Award was given to the Reflecting Photonics team from Southampton that you read

about on our front page. This project targeted an audiences that normally wouldn't engage with Physics and really impressed the selection panel!



The awards are taking a break in 2016 but will be back in late 2017. This gives you plenty of time to work on your ideas, and who knows, you may be picking up the Innovation Award or the Newcomer Award then...

### Running your own blog: Astroquizzical

I run a blog called Astroquizzical which came into being after sitting at a booth at a university event with a sign pointing to me saying "ASK THE ASTRONOMER". I didn't have a free five minutes through the whole three hour event, and wound up answering questions I couldn't have made up. With some encouragement, I decided to try and set up a similar space online, but I was pretty convinced it would fail in about a month or two. I figured the worst case scenario would be that no one would read it, and I would at least get some practice writing for a non-scientific audience, which seemed like it would be useful.

Astroquizzical is set up to accept anonymous questions about space, which I then try and answer as clearly and as interestingly as I can. I was pleasantly surprised that Astroquizzical did not flop immediately, and I continue to be pleasantly surprised both that it is still going and at the opportunities that it has opened for me. It has now been going since 2013, gathering over 750 subscribers across all platforms, and I have answered over 120 questions, with many more awaiting answers.

## Upcoming Events Include:

17-19 April 2016

Strong Correlations Workshop  
Old Thorns Manor Hotel, Liphook,  
GU30 7PE

27 May 2016

Opportunities, CV, Interviews  
Royal Astronomical Society, London  
W1J 0BQ

9 June 2016

Connecting Industry and Researchers  
in Physics  
University of Surrey,  
GU2 7XH

4-7 July 2016

GRADnet Summer School  
Herstmonceaux Castle, Herstmonceaux,  
BN27 1RN

A full list is available on  
the GRADnet VRE.  
[www.sepnet.ac.uk/vre](http://www.sepnet.ac.uk/vre)

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Just persistently writing has opened up a particularly weird and unpredictable (though rewarding) path to follow. Friends who knew I was writing it have pointed me in directions that led to being on a panel at a comic convention, performing at Nerd Nite Brighton, writing on ever-larger platforms such as Forbes, and most recently, being a judge at SMBC Comics' BAHFest event in London. I'm looking forward to seeing where it leads me in the future!

**Jillian Scudder, Post-Doc  
School of Physics & Astronomy, University of  
Sussex**

<http://astroquizzical.com/>

## Public Engagement Opportunities

The SEPnet Outreach team is constantly asked for physicists for all sorts of events, including talks, comedy nights and discussions. To keep up to date with all the latest Public Engagement opportunities, including details on available funding, please sign up to the Public Engagement mailing list at,  
[www.sepnet.ac.uk/public-engagement](http://www.sepnet.ac.uk/public-engagement).

SEPnet will be starting their own physics blog in the coming months and we will need blog entries! If you'd like to write an entry based on your PhD, get in touch with your Outreach Officer or e-mail

## GRADnet Training

So you've read through all the newsletter and now you want to do more, where do you go to next?

Here at SEPnet we are offering different opportunities to get involved! If you are completely new to Public Engagement, we'll be offering an introductory training session along with training on blog-writing and presenting. These will be delivered by scientists working in science communication.

All materials including those featured in this issue can be found on the GRADnet VRE. [www.sepnet.ac.uk/vre](http://www.sepnet.ac.uk/vre)



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