UNIVERSITY OF BIRMINGHAM

THE QUEEN'S ANNIVERSARY PRIZES FOR HIGHER AND FURTHER EDUCATION 2011

EngD Outreach Report

October 2013

EPSRC Engineering and Physical Sciences Research Council

Introduction

This document captures the activities of the EngD Students during the last Academic Year.

The intention of this record is not only just to disseminate information but to act as inspiration to the next generation of Research Engineers to encourage them to give something back to the public.

The majority of the Outreach activity has included the Students visiting Schools. A notable success was the TCE article by Chris Hewitt, Laudina Duffus and Jon O'Sullivan on Secret Formulation Engineers.

RWG October 2013

The EngDs have taken part in a variety of Events across the UK and Europe.

The following reports give the details of these Events and also include the plans for Outreach activities over the next year:

Akash Beri
David Ryan
Ioanna Zafeiri
James Champion
Jason Dawes
Jon O'Sullivan
Katherine Preece
Laudina Duffus
Martin Riley
Olga Mihailova
Suzanne Pinkney

Future Activities
David Bell

Akash Beri

Name of Event	**What's my line**
Event Description	**An event designed for Year 9s to guess the occupation of guests. This was done to break down perceptions of what people should do and also give an insight to the vast jobs that are out there.**
Date	**16/01/2013**
Location	**The international School and community college East Birmingham**
Responsibilities	**Only answer 'yes' and 'no' to various questions so that my occupation can be identified.** **Interact with Year 9 students and answer any other questions they have in regards to my field.**
Audience	**Year 9 groups – 5 workshops each having around 10-15 students**

David Ryan

Events attended

Event: FAMELAB – gave presentation in Regional Heats

Date and Location: 1st December 2012, Thinktank, Birmingham

Purpose: Gave presentation. Participating in an event which promotes science to the public. Prepared and gave a 3 minutes presentation on my work, which is emulsion science, and promoted the EngD programme of the School of Chemical Engineering. Got through to the regional final.

Audience: around 40 scientists and members of the public

Event: FAMELAB – gave presentation in Regional Finals

Date and Location: 11th December 2012, Thinktank, Birmingham

Purpose: Gave presentation. Similar to previous event: gave a presentation on chocolate science, drawing on some of the work from the department's research programmes.

Audience: around 40 scientists and members of the public

Event: MATLAB SIG (Special Interest Group) – organised and ran Initial Meeting

Date and Location: November 2012, Mech Eng, University of Birmingham

Purpose: Getting the community at UoB together who are interested in all MATLAB related issues at university, such as getting started (training), licencing, collaborating, more open access. I started off discussion in each of 6 areas, then opened it up to the floor so there could be an open conversation about any improvements necessary. Feedback was positive that it was good for MATLAB SIG to be active and helping people with access to MATLAB at University.

Audience: around 30 postgraduates and academic staff

Event: MATLAB SIG – organised and ran Coding Meeting

Date and Location: January 2013, Poynting Building, University of Birmingham

Purpose: Helping people to collaborate on MATLAB applications, learn what other people are doing, and for some initial experience in using MATLAB. 2 groups of 4/5 people, 1 demonstrator per group. Half an hour spent on each person's research, then the non-demonstrators swapped groups, and repeated for another half an hour. General feedback was that it was good to see how people were using MATLAB in different research areas. It was also quite tough to demonstrate code properly in half an hour!

Audience: 9 postgraduates and staff

Event: MATLAB SIG – organised and ran Licencing Meeting

Date and Location: March 2013, University of Birmingham

Purpose: Discussing the difficulties and costs of gaining a licence to use MATLAB, and discussing possible solutions both now and in the future.

Audience: All those who are interested in licencing issues with MATLAB

Event: Unilever Presentation of Sonolator results for 2 stream mixing via injector or T-piece

Date and Location: March 2013, Unilever Research & Development, Port Sunlight (URDPS)

Purpose: Gave presentation. Feeding back to Unilever the results of pilot plant studies I did in 2012 to determine the differences in emulsification with 1) pre-mix 2) injecting the oil phase just before the Sonolator orifice or 3) mixing the oil phase upstream of the Sonolator inlet via a T-piece. This is expected to be of practical relevance for the way Unilever use the Sonolator.

Audience: expecting 10-20 Unilever employees

Event: Graduate School Images of Research photo competition (2013)

Date and Location: 18/03/2012, Business School, University of Birmingham

Purpose: Presented 4 framed images of my CFD work, to raise awareness of my research project

Audience: 80 attendees (estimated)

Committees participated in

Committee and Position: MATLAB SIG, I was appointed chairman of committee

Date and Location: 2012/13 academic year, University of Birmingham

Purpose: Chairman of committee. To allow existing MATLAB users to be aware of each other, meet and share ideas; to promote the interests of MATLAB users, to promote wider awareness and usage of MATLAB, and to address any challenges in terms of accessing MATLAB software

Audience: Number of MATLAB users or active SIG members not yet known, since SIG has not been active in the past, but anticipate around 100 MATLAB users university wide, and maybe 20-50 active SIG attendees

Committee and Position: BEAR School Representative for School of Chemical Engineering

Date and Location: 2012/13 academic year, University of Birmingham

Purpose: Member of Committee. To allow the School of Chemical Engineering feed back to the BEAR Committee about how the BEAR high performance computing cluster can be best used to the advantage of School of Chemical Engineering.

Audience: Committee is around 10 strong. Represents the EPS college and those at UoB who use BEAR computing cluster.

Helping groups and individuals

Person/Group Helped: Aslam Ghumra – MATLAB trainer interviews

Date and Location: Feb 2013

Purpose: Member of interview panel. As committee chair for MATLAB SIG, and with previous experience of being a CFX trainer, I was asked to be on the interview panel for appointment of the University's MATLAB trainer for 2013. I asked each of the 3 candidates many questions about their teaching experience, since I have practical experience in this area. I discussed the merits of each applicant with the rest of the panel, fed back my opinions on the most suitable candidates to Aslam, who was then able to make an appointment based on the opinions of the whole panel.

Person/Group Helped: Group 6, Product Design Exercise (undergraduates), Chem Eng

Date and Location: Jan-Apr 2013

Purpose: Postgrad team leader of undergraduate design project. Provide leadership for team. Make sure they focus on task. Make sure they document their work. Help them in any way necessary to their success, including design advice and how to run the group successfully. Help them to develop self-motivation. Marked the individuals on their performance in the group.

Person/Group Helped: Tom Skuse and his friend Tom, in department

Date and Location: September 2012

Purpose: Personal advice. Helped him with the mathematics for PEPT in a vertically stirred tank.

Person/Group Helped: Maggie Huyen (my wife)

Date and Location: Sept 2012 to Mar 2013

Purpose: Personal advice. Helped her with CV writing, answering interview questions concisely and accurately, how to recall the specific examples to give in interview, confidence in interview.

Person/Group Helped: Various academics at university interested in the running of MATLAB SIG

Date and Location: Sept 2012

Purpose: Canvassed viewpoints. During the setting up of the MATLAB special interest group, I interviewed 5 academic staff and found out their views on the current state of the group and the future direction they thought was necessary. This helped me to organise 3 events to date which met the needs of the MATLAB community at UoB.

School visits

Event: "Guess My Job" as part of STEMNET

Date and Location: 27th Nov 2012, Lode Heath School, Solihull

Purpose: Raise awareness of School of Chemical Engineering, University of Birmingham with children. I answered 20 questions from each group (yes/no questions) about what my job was. Then I told them a bit about the department, what I do as a doctoral researcher, and the types of qualification they need to be a doctoral researcher.

Audience: 4 groups of around 15 school children in years 8-10.

Event: Mock Interviews as part of STEMNET

Date and Location: 4th Dec 2012, Lode Heath School, Solihull

Purpose: Helping school pupils to have good interview technique and to make them more aware of what employers want

Audience: Interviewed and fed back advice to three GCSE age children

Exhibitions/Trade Fairs, Open Days (Tour guides), TV and Radio interviews

Event: Video promoting EngD

Date and Location: April 2012, School of Chem Eng

Purpose: Promote the EngD programme more widely – the video was being developed by Peter Clark and Sam Wilkinson.

Audience: Video audience.

Event: MATLAB EXPO 2012

Date and Location: November 2012, NEC, Birmingham

Purpose: Network with industrial and academic representatives and learn more about how MATLAB is being used more widely.

Audience: Spoke to many people from a gathering of around 200 people.

Future Plans

- Keep attending many events and presenting my research
- Keep serving on MATLAB SIG committee, and make the group active for promotion of MATLAB as a useful research tool
- Visit more schools with STEMNET
- Attend any other events or take any other opportunities as they arise

Ioanna Zafeiri

Public Engagement & Schools Outreach Training Workshop:

On 14th November 2012 Dr. Emma Carter ran an outreach training workshop in the Chemical Engineering Department. The workshop was aimed at introducing Chemical Engineering research students and Post-Docs to key types of public engagement activities, focusing particularly on school children.

It was a three hour hands-on and greatly interactive workshop that involved a mixture of short presentations, discussions, participation, as well as group work. After going through the educational learning theory and some teaching strategies with the course facilitator, we were challenged to present within a couple of slides our research projects in simple terms and choosing an age-appropriate content. We were also shown how to run effective and enjoyable outreach activities and then apply this knowledge to deliver existing outreach activities and also design a new learning activity based on our own work.

It proved to be an excellent opportunity to get an impression on schools outreach that made me realise the power and satisfaction of sharing experience with young people to engage and make them curious about science. I left from the workshop enthusiastic and with the confidence to take part more actively in public engagement in the future.

Undergraduate and Postgraduate students supervision

I contributed in the supervision of two MEng Chemical Engineering final year students during the spring term of 2013, as well as the supervision of an MSc student together with another EngD student during the summer of 2013. Students worked either in a team or individually on a project related to my work. My role and responsibilities consisted in working initially with the students to introduce them to the topic and show them the equipment for their experimental work. I was committed to supervising their progress in the lab, organising frequent project meetings, advising and coping with problems and difficulties that arose throughout their projects. Through this experience I contributed to student learning and developed my own approach/'best practice' to supervising, according to the student's personality and capabilities.

Name: James Champion

Event title: Building bridges/ Careers speed dating

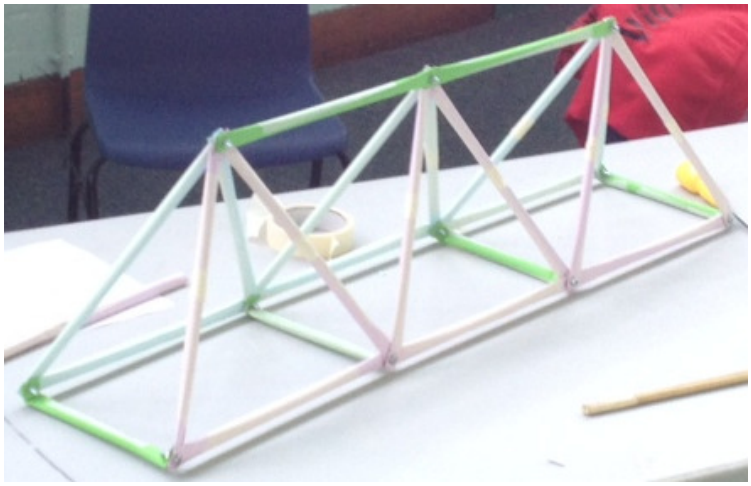
Date: 14/11/2012

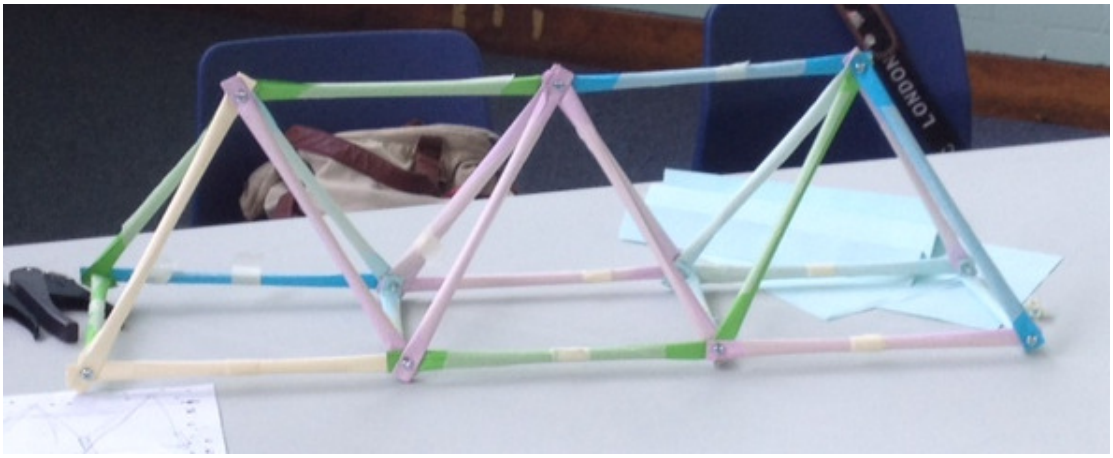
Venue: Bishop Barrington School, Bishop Auckland, Teesside

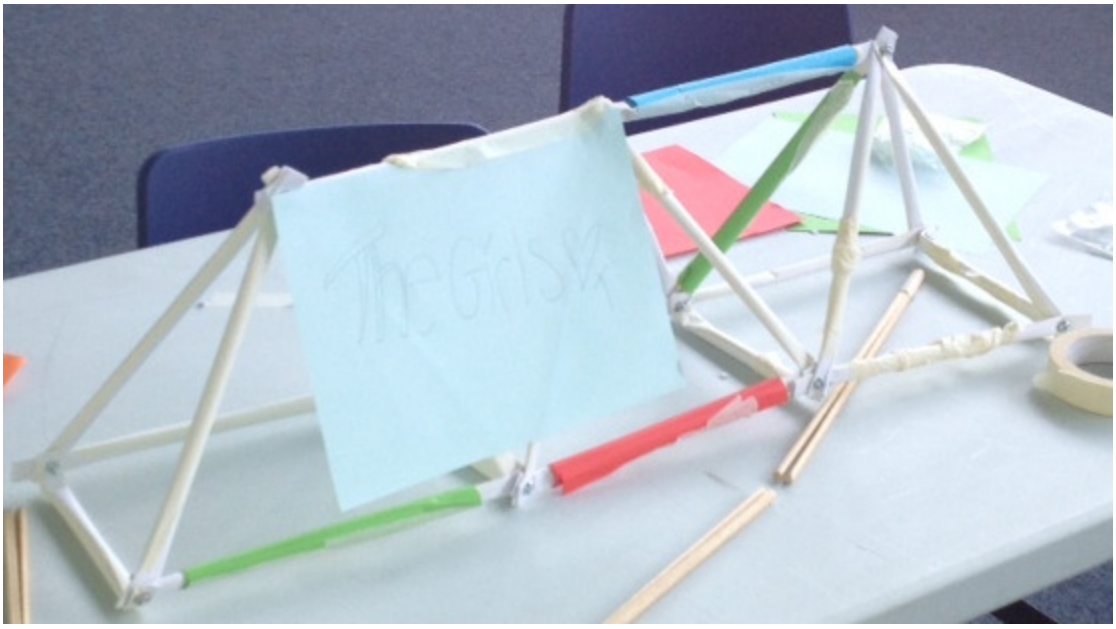
On 14th November 2012, I visited the above named school for public engagement purposes. The day was organised by STEM and the aim was to encourage girls to consider Engineering as a potential career path. Both the morning and afternoon sessions only involved girls.

In the morning, around 50 Year 9 girls were split into groups of 5 and had to build a bridge using paper, a paper roller, nuts & bolts and a hole punch. The STEM leader presented step by step instructions before starting for the groups to follow. Once the groups had started, the six ambassadors present (myself included) circulated and helped the groups with the building. I eventually attached myself to one group for the duration. Although not everyone was engaged, the majority of pupils involved showed maximum effort. I was also asked questions based on my career and what engineering I do. The class was given a time limit to complete their bridges. This was a good stimulant for the girls to work together and be efficient. Once finished, weights were placed on the bridge to test for strength. Even though there were no prizes available, it was apparent that everyone involved wanted their bridge to succeed. A few of the pupils involved commented that they wanted to pursue a career in Engineering. Examples of completed bridges are shown below.

The afternoon session had more of a focus on career building. It involved around 40 Year 11 girls split into 9 groups. 8 other ambassadors and I were each sat at a table and saw every group for 10 minutes in a speed dating type format. The aim was for every ambassador to discuss their day to day engineering role and to promote this as a career. Most of the ambassadors worked in different engineering fields, giving the pupils a wide range of possibilities. I brought to the school a variety of different films that my company produce. This gave some interaction and everyday uses. Some of the groups I saw had already decided on a different career and weren't very interested in my content. On the other hand, a number of pupils seemed genuinely interested and asked good questions. They were interested in everyday applications in polyester films as were unaware how useful it can be. This session was generally a success but in the future it would be useful to involved Year 9 rather than Year 11 pupils, as this age group are likely to be less certain on their desired career.







Event title: Chemicals and plastics

Date: 18/04/2013

Venue: Hurworth School, Darlington

This event was a half day in a Darlington secondary school. 60 pupils each from both Year 10 and 11 were given talks by myself and other STEM ambassadors on the polymer industry and common ways of getting into this. It was stressed to the pupils that there are many different routes into engineering. I brought in some props showing DTF film and also different dyed polymers. The day was a good way of describing how interesting and useful polymers are. The attendees generally seemed interested in what I was saying and we all got good feedback from members of staff.

Conferences:

I attended and presented at two conferences this year: the TAPPI PLACE one involved the publication of a conference paper. My presentation in the STAR Conference, Orlando is in the process of being made into an article for a CFD magazine. In this article the EngD will be mentioned along with the use of CFD in formulation engineering.

Future public engagement

I am hoping to carry on with doing STEM type work in schools in the local area to promote the EngD and DTF. I have emailed the whole of DTF Wilton regarding STEM and hopefully a few of us will be able to run a DTF themed day with a few local schools involved. There are a number of EngD's based in the north east and it would be good to run a joint event. Once I become more involved with STEM I should be able to expand my portfolio and run my own event.

I may try attending at least one conference next year and this would allow me to further promote the benefits of the EngD scheme to a wider audience. There are a number of Chemistry and Chemical Engineering undergraduate placement students whom I will suggest the EngD to them as an alternative to the standard PhD.

Jason Dawes

Nuffield Project Report

Nuffield Research Placements (previously Nuffield Science Bursaries) provide over 1,000 students each year with the opportunity to work alongside professional scientists, technologists, engineers and mathematicians. The projects are available for students in the first year of a post 16 technology, science or engineering course. My sponsoring company Bristol-Myers Squibb has a Nuffield student every summer; in summer 2012 I had the opportunity to mentor the Nuffield Student. The project lasted for 6 weeks, during which I was responsible for the daily activities of the student. The aim of the project was to investigate the robustness of a technique used to measure envelope density. It was my responsibility to demonstrate the technique and explain why it is used and how we can use the results to make formulation/process decisions. During her time at the company I gave the student the opportunity to meet and discuss with other members of staff and gave her an overview of all research activities that are required to develop a pharmaceutical drug product. The requirement of the Nuffield student was to write a report on the project and attend a presentation event. It was my responsibility to provide guidance on scientific report writing and presentation skills. A great deal of data was generated and stored using excel, I provided support to the student who at the time was unfamiliar with data analysis using excel. The student was selected by a scientific committee to participate in the UK finals in London in which she was first runner up for the young scientist of the year award.

Jon O'Sullivan

Public Engagement Activities

Public Engagement Activity - 1

Type of Event: Outreach work at Barr Beacon secondary school to tell year 9 students about Chemical Engineering as a career path

Date of Event: 12th November 2012

Location of Event: Barr Beacon School, Walsall

Purpose and benefits of the event: The purpose of the event was to show secondary school students the benefits of doing chemical engineering and the type of work that a chemical engineer does. For one day I gave three 1 hour long presentation with another postgraduate student, Laura Lee, to year 9 children about Chemical Engineering as a career path.

Audience: 80 secondary school students.

Public Engagement Activity - 2

Type of Event: TCE article on Formulation Engineering

Date of Event: March 2013 Issue

Location of Event: Distributed throughout to members of IChemE

Purpose and benefits from event: The purpose of this event was to raise awareness of the importance of public engagement to the readership of the TCE, a monthly publication distributed by the IChemE.

The article was written between four EngD students (Laudina Duffus, James Champion, Robert Osborne and myself) with another EngD student editing the document (Christopher Hewitt).

Audience: The audience for this public engagement activity was the readership of the TCE

Public Engagement Activity - 3

Type of Event: Chemistry at Work

Date of Event: 5th February 2013

Location of Event: Thinktank Science Museum, Birmingham

Purpose and benefits from event: The purpose of this event was primarily to help guide secondary school children from one lecture to another in the Thinktank Science Museum and secondly to talk to the students about our own experiences in the field of science.

This event was conducted with the help of another EngD student, Olga Mihailova.

Audience: 200 secondary school students

Public Engagement Activity - 4

Type of Event: Community Day

Date of Event: 9th June 2013

Location of Event: Aston Webb Building, University of Birmingham

Purpose and benefits from event: The purpose of the event was to show secondary school students the benefits of doing chemical engineering and the type of work that a chemical engineer does. This talk was given with another postgraduate student, Laura Lee.

Audience: 20 secondary school students

Public Engagement Activity - 5

Type of Event: Discovery Day

Date of Event: 24th June 2013

Location of Event: School of Chemical Engineering, University of Birmingham

Purpose and benefits from event: The purpose of this event was to being the concepts and benefits of Chemical Engineering to secondary school children. This activity was given with the departmental outreach officer, Jon Wood, and involved giving an hour long presentation discussing chemical engineering and getting the children to conduct a design exercise (design of an ice cream factory).

Audience: 50 secondary school children.

Outreach Workshops

Additional Activities Contributing to Public Engagement – 1

Type of Activity: Outreach Workshop

Date of Activity: 25th October 2012

Location of Activity: School of Chemical Engineering, University of Birmingham

Purpose and Benefits of this Activity: To show students how to engage and conduct outreach with a range of different age groups. Workshop involved practise sessions where presentations were given by participants. Workshop was given by Dr. Emma Carter.

Additional Activities Contributing to Public Engagement – 2

Type of Activity: STEM Induction Event

Date of Activity: 9th January 2013

Location of Activity: Beech House, University of Birmingham

Purpose and Benefits of this Activity: This activity involves an induction to become a STEM ambassador. This would allow me to give outreach activities in schools in my local area in the field of science and engineering. Workshop was given by Julia Kingston and Jessica Cooper.

Katherine Preece

Since arrival in the Netherlands, I have become a member of the Vitality Runners Vlaardingen (VRV) which is a running club for Unilever Research & Development Vlaardingen (URDV) employees of all levels.

VRV offer a series of events for its members to attend, such as brand themed 5 & 10 km races.

A popular running event in Holland is the Dam to Dam Loop with 55,000 bib numbers and 250,000 spectators expected this year. Unilever provided 30 spaces for Unilever employees to run a 10 mile run from Amsterdam to Zaandam this year. As well as funding the entrance fee for the event, Unilever have provided a €100 donation to support the Johan Cruyff Foundation. The Johan Cruyff Foundation is an organisation which gets young people exercising every day, particularly children with a disability.

Event type: Unilever sponsored 10 mile run for charity

Event: Dam tot Damloop

Event date: 22/09/2013

Laudina Duffus

Trade Publication

Along several of my colleagues, I contributed to an article titled '*IChemE's Secret Formulation Engineers'* in the TCE magazine, published by IChemE. The aim of the article was to raise awareness of Formulation Engineering and the EngD degree and my contribution detailed the research area that my work focuses on and how, although it may not be obvious, it relates directly to consumers. Circulation of the magazine is available to all IChemE members of all levels ranging from undergraduate students to company directors and chartered engineers in industry.

Student Project work

I assisted in the supervision of 2 MEng Chemical Engineering fourth year students in terms of their final research project, an MSc Chemical Engineering student for their research project as well as laboratory demonstration and project work for a summer placement student from another scientific discipline. Students worked either in a team or individually on various projects directly related to my research area. My responsibilities consisted of working initially with the students to help with initial understanding of the subject area and demonstration and training them to use laboratory equipment for the purpose of their experimental work. I was tasked with regularly supervising their progress in the lab, organising and contributing to frequent project meetings, advising and dealing with problems that arose, as well as creating awareness of the research area and helping with students' understanding of the topic.

Martin Riley

On the 8th June I was involved with the IOP's "Physics in the Field" tour at the Royal Cornwall Show. The tour travels all over the country and is designed to inspire interest in physical science amongst children, and hopefully spark interest for some illustrious careers in the sciences.

The roadshow involves "physics busking" – fun experiments intended to make science accessible and interesting, potentially to schoolchildren who might be tempted to write it off in a classroom context. It went down well with both young and old, the adult contingent usually requiring a bit more persuasion to try things out than the kids but enjoying them just as much when they did. A set of printed cards was available for families to take away and try these experiments and more at home.

The demonstrations were made from household objects and designed to show simple, yet somewhat counterintuitive phenomena. One involved pumping air out of a bottle containing a marshmallow. We would ask people what they expected to see and the replies would come, "the marshmallow will float up", " it will explode", "it will shrink", "nothing" etc. Then we would show the marshmallow expanding under reduced pressure and explain what was happening. There were a few correct guesses, not many who knew the answer to begin with, and a lot of surprise and amazement, especially when the vacuum was released and the marshmallow quickly shrunk back to its original size. It was really heartening to see something as basic as this give so much joy and wonder, and I vividly remember one boy blinking and covering his eyes – he really couldn't believe them! Of course after that he had to see all the other experiments and have all the science explained in detail. The level of interest far exceeded my expectations, especially from the adults who were often as stumped as the children about what would happen, and would then offer lots of guesses in a frantic attempt to get the right answer.

The Royal Cornwall Show is one of the largest agricultural shows in the country, attracting around 120,000 visitors over three days each year. As well as the showjumping and animal shows, there is music of all kinds, food and drink from across the county, royal visits, flyovers and a parachute display, dance displays, vintage cars and aircraft and all sorts of stalls and entertainment.

We were in the BBC Cornwall tent for the duration of the show, competing to be heard with several bands, dancers and a magician! Our line was that we had the real magic as opposed to deception, and we had a steady crowd throughout the day. There were two volunteers apart from myself, Alex and Tracy, who are both staff members at Bath University, as well as Miranda from the IOP in Bristol who organised the event.

The full set of experiments along with information about the roadshow is available at
http://www.physics.org/marvinandmilo.asp


BBC
Children
in Need

Olga Mihailova

1. Public Engagement Workshop (5th of November, 2012)

   School of Chemical Engineering, University of Birmingham

The workshop was organized by the Emma Carter, who at the time was the School of Chemical Engineering Outreach Officer

The workshop introduced the basic concepts of outreach and working with schools and students. As a part of the workshop I had to give a short presentation which explained a relatively complex idea in a way which would be understood by people without a strong technical background.

The workshop also introduced STEMnet (Science, Technology, Engineering and Mathematics Network) and provided advice on becoming a STEM ambassador

2. STEM Ambassador Induction Event (11th December, 2012)

   Thinktank Museum, Birmingham

The event was aimed at processing the application for becoming a STEM ambassador and networking with other future ambassadors.

3. STEMnet Chemistry at Work Event by the Royal Society of Chemistry (5th February, 2013)

   Thinktank Museum, Birmingham

During the event a number of schools visited talks about different applications of chemistry in everyday life and in innovation.

As an ambassador I was responsible for looking after the children during the event as well as taking them from activity to activity. I was responsible for 4 groups with approximately 30 children in each group (10-12 year olds).

In addition in the breaks between the activities I talked to the children about my degree and the work I am doing in my research. In addition I answered the questions the children had about the event or science in general

4. Skirting Science Event (5th July, 2013)

Light Hall School, Solihull

The event was aimed at getting more girls in perusing science as a future career. During the event myself and Laura Lee introduced chemical engineering to 3 groups of 10 girls in each (10-12 year olds).

Apart from giving them a basic understanding of what chemical engineering is and what a chemical engineer does we involved them in a number of activities. The main activity was getting the girls to design their own ice cream manufacturing plant using what they learned about chemical engineering.

As one of the presenters I was responsible for giving a part of the presentation about chemical engineering and supporting and guiding the girls during the group activities.

Suzanne Pinkney

In October 2012 I helped run a STEM day at Poltair School in St Austell, Cornwall. The activities were making bouncy balls, paper rockets and slime. Each activity had its own particular aims. The bouncy balls were made using two different methods: one that left a hollow in the centre and one that made the ball solid throughout. The pupils then measured how far each ball bounced when dropped from a particular height and then considered why one ball bounced higher than the other and also why neither ball bounced up to its original height.

The paper rocket activity involved teams of pupils designing and making rockets from paper and card and firing them from a tube using a bicycle pump. The aim was to see who could make the rocket that went the furthest and how the design influenced this. The final activity, slime, involved making slime to two different recipes and investigating the effect of this on the viscosity. This was measured using a ball bearing, ruler and stopwatch. The pupils were asked to consider the influence of the ingredients on the viscosity of the slime and to try to invent a recipe in which the ball bearing would fall at a specific velocity.

My role was to help the pupils carry out the experiments and understand the significance of the variables. For some pupils it was also necessary to impart some enthusiasm! There were also children who were interested in what I did and asked some questions about careers in science and how their interests could be linked. For example, most of the girls were interested in make-up and cosmetics but did not know that science plays a large role in developing these products.

I am hoping to help out in a female 'What's My Line?' day at a school in Plymouth in September/October 2013. Year 8 girls will question a panel of women who work in male-dominated environments to discover what their role is and this will then be followed by a general Q&A session. I am also hoping to help out with another STEM day and attend a careers fair as part of the IChemE's 'why not chem eng?' campaign.

Future Activities

David Bell

Outreach workshops for Chem Eng post-grad students:

The aim of the workshops will be to help develop skills and confidence in going in to schools to give a talk about your research/career, deliver an 'off-the-shelf' workshop or develop and deliver your own workshop based on your own research. The session will be 3 hours and will require some advance preparation. I propose running it either in the morning (9.30 – 12.30) or afternoon (2 – 5pm). It will be part theory, part having-a-go and part actual activity planning.

Register interest as STEM ambassador

Applied for SET for Britain:

General Objectives of SET for BRITAIN Competitions and Exhibitions

- Presenting and discussing "ground-breaking" and frontier UK research and R&D to Members of both Houses of Parliament at Westminster
- Fostering greater dialogue and engagement between early-stage researchers and Members both in Westminster and in their Constituencies
- Encouraging personal interaction between all researchers
- Competing nationally for a prestigious Medal and Prize for the best poster i.e. the best research work
- Raising the profile of Britain's early-stage researchers at Parliament and elsewhere
- Contributing to various national initiatives e.g. the UK's National Science and Engineering Week
- Many researchers also gain an awareness of the challenges and excitement in other areas of research, possibly resulting in collaborative projects. They receive a brief introduction to Parliament and can discover also how Parliament deals with science, engineering, medicine and technology.
- Information on the more recent history of and background to SET for Britain is given below, in an article which appeared in the Summer 2006 issue of Science in Parliament, the Journal of the Parliamentary and Scientific Committee.