



## 2016-2017 Train and Engage Project Leaders

### **Erika Aquino - Discover Ophthalmology Evening Festival**

The “Discover Ophthalmology Evening Festival” is a chance for the local community surrounding UCL Institute of Ophthalmology at Old Street to engage with scientists, learn something new about vision and participate in cutting-edge research. The project will be an evening of fun and interactive science for all ages and backgrounds - all you need is an open mind and willingness to learn! Stalls will include – simulation glasses of different impairing diseases, how to make DNA from your own spit, making bracelets out of genetic codes, build your own engineered tissue from jelly and beads, knit a nerve cell to replicate the knitted retina (an existing public engagement project at Moorfields), create a stem cell using Play-Doh, make your own retinal layers using sweets and cookies.

### **Josh Bailey - PPLPWR Sustainability Demonstration at UCL’s Brainchild Festival**

The UCL-based PPL PWR sustainability collective is planning a green demonstration of a variety of eco-friendly ideas at the UCL spin-out Brainchild Festival in July 2017. As well as engaging with festival goers about sustainable technologies as PPL PWR has done in the past, we want to engage with the creative audiences which attend Brainchild with activities, talks and demos including thought-provoking art installations (which themselves will be the product of an art/science collaboration) and recycling and a solar tea café. By opening a dialogue across the perceived divide between the Arts and the Sciences, we hope to get artists to think about the sustainability of the materials they use, inspire new artists and tap into their creativity to generate exciting new ideas for future PPL PWR events and installations.

### **Heather Fitzke - You show me your playground and I’ll show you mine...**

We want to take STEM researchers out of the lab and into the local community to develop their confidence and skills for engaging with non-traditional audiences away from the ‘safety’ of PowerPoint slides. A one-day workshop at a local adventure playground will be offered to around 20-30 UCL students and early career researchers.

The benefit for UCL researchers will be to build collaboration skills and develop public engagement in a community setting and by bringing together a mutually supportive community of practice (CoP) to share ideas and opportunities for public engagement with diverse audiences.

## **Eirini Gallou - Lets' explore our heritage together: open day in South Ronaldsay, Orkney isles**

The project invites local families with school children aged between 6-11+ to take part in creative activities exploring their relationship with heritage sites in their local context, that of the remote islands of Orkney in Scotland where the researcher conducts her PHD research. The open day will be conducted in one local community centre, adjacent to the local primary school on the island of South Ronaldsay and will be part of the activities taking place during an annual local folklore festival, the so-called "Boys' Ploughing Match".

## **Laura Kischkel - How do Babies' Brains develop? Discussing views on infant development in a community in the rural Gambia**

Our research looks at infant brain development in The Gambia, West Africa. To engage with our cohort of families and their infants, we would like to organise an afternoon during which researchers and participants of this study can come together and explore brain development through a range of workshops and activities. There will be several different workshops, related to early infant development. They will illustrate how babies use different brain areas during everyday activities, how babies see the world around them and how they form early memories for learning. Secondly, we will have an activity describing the abilities of newborn babies, from reflexes to social interaction; describe the use of the Neonatal Behavioural Assessment Scale to measure these abilities in The Gambia and Cambridge, including any similarities or differences in baby behaviour at these two sites; and share previously-explored local parents' and elders' views on this tool and adaptations for its use in The Gambia. Further, there will be a short play performed by a group of Gambian staff to illustrate how parent infant interaction affects development as well as a demonstration of our lab equipment.

## **Ka Yui Kum - Herbal Medicine: Myth and Reality**

Herbal medicines have been used widely around the globe, and Britain has a historical heritage in the use of herbs from a range of diverse cultures, such as Ayurveda and traditional Chinese medicine as well as British herbalism. Over 80% of people in the world use herbs for healthcare, in addition to them using seasoning and in cosmetics. Herbs have been integrated into our way of life but how do we use the herbs without potential risks and misunderstanding of their medicinal value? "Live with herbs" is a workshop that will answer the question and will empower our participants to utilise our herbal knowledge in daily life easily. The participants will not only be able to learn from the interactive talks delivered by an herbalist but also from other audience members sharing their herbal knowledge in group discussion.

## **Sol Perez Martinez - Co-creating an Urban Archive – Exploring possibilities for UCL East's Urban Room**

'Co-creating an urban archive' is a collaborative project that involves young people from East London, their teachers and built environment professionals from UCL in the inquiry and representation of the past, present and future of their surroundings. An 'urban archive' is a collection of objects, texts, or drawings that represent a defined urban area, in this case surrounding a school in Stratford. The material is organised in a structured way that allows it to be researched, expanded or exhibited by other members of the school community. Using an array of innovative learning methods (e.g. place-based education, using places as a tool for learning; urban pedagogy, using the urban built environment as a learning tool; and design thinking, solving problems as a way of learning), it aims to increase the awareness, interest and agency of the students in relation to their local built environment by exploring real urban issues. Also, it seeks to discuss and explore possibilities of how an 'Urban Room' at UCL East could help other young people to become interested in the environment and enhance their civic engagement.

## **Stefan Siwiak-Jaszek - Quantum Secrets of Photosynthesis**

'Is this leaf better at quantum mechanics than Albert Einstein?'

This PE project is all about how plants exploit the weird world of quantum mechanics to enhance the fundamental life-sustaining reaction that is photosynthesis. We provide festival goers with a chance to learn and interact with real research into how Nature is yet again outsmarting us. We ask and answer questions such as: What kind of organisms photosynthesise? Does a plant use quantum mechanics for food? How might we learn lessons from Nature to improve solar energy technologies?

Our team of enthusiastic and knowledgeable PhD students will guide Glastonbury and Greenman festival goers through a range of interactive exhibits collectively called 'Quantum Secrets of Photosynthesis'.

## **Georgios Spithourakis - Human-Machine Hybrid Poetry Workshop and Performance**

This all-day poetry workshop is directed towards writers and computer scientists with a shared interest in poetry and AI (no formal training is required). The basic principles of artificial creativity will be presented, and participants will be guided to apply these principles to write poems with pen and paper. Through these exercises participants will immerse themselves into the mysterious consciousness of an artificial neural network, which will be complemented with traditional poetry writing exercises that focus on human creativity. At the closing of the workshop, the participants will share their thoughts and poems in a poetry slam, and they will discuss with artists and academics about the role artificial intelligence will play in the future of culture and art production.