

reality



Imperial College  
London

# ENGAGEMENT ACADEMY

Oct 2018 – Mar 2019



## Nuria Oliva Jorge

### Nano-hacking Cancer

This project consists of a card game and a lay-audience explanation of the concept of personalised nanotechnology to treat cancer. The card game is similar to the famous game “Spot it”, where players have to be the first ones to spot a common item on their card and a card in the middle. In this game, players have to spot matching shapes. After playing a few hands, I then explain that this is a similar concept to personalising nanotechnologies that match a specific cancer cell signature in a patient, like the shapes on the cards matched each other.



## Hilary Ward

### Lol-labs

Hilary Watt has performed Science comedy at 5 open-mic nights in London pubs. She jokes around her passion for (medical) Statistics. Her act is about Florence Nightingale, the statistician! Florence developed novel types of graph to show soldiers' mortality data. Florence used them to enhance her political influence around improving sanitation. Improved sanitation greatly increased life expectancy. My act touches on genetics, and the surprise that we have fewer genes than cabbages. I am developing material around the digestive system, and the value of probiotics. I am exploring the potential to teach Science via comedy.



## Emily Pickering

### CHARIOT Register

The CHARIOT Register is managed by the AGE Research Unit within the School of Public Health. It is a list of healthy individuals who would like to be contacted about research studies into the prevention of dementia. Our research aims to better understand dementia; the risks of developing the disease and what factors might protect against it. Almost 35,000 older people have joined the Register but we are always looking for new members. Our Outreach team are planning talks and events, as well taking a stall to existing events, to engage with the public and support more people to join clinical studies.



## Christina Bertulli

### Crystal Structure

The aim of my project is to showcase the research done at the Centre for Process Systems Engineering around developing computer-based tools that can model the crystal structure of drugs and ultimately provide better design of experiments for the development of new medicines within the pharmaceutical industry.

At the Imperial Festival we will deliver 3 activities around molecules and crystals:

- ⦿ A video simulation of vibrating molecules under changing conditions
- ⦿ Activity building molecules out of marshmallows and straws
- ⦿ Guessing game involving 3D-models of painkillers



# Elena Psyllou

## Have a safe flight

My project involved an exhibit at the Imperial Lates on the 7th March 2019 with title Have a safe flight. The exhibit aimed to inform the public on small non-commercial aircraft gone stray into the airspace of airports through interactive activities. The public draw a route on a map and that initiated a discussion on what can drift the aircraft into the airport's airspace. The clues were presented on a board. It was a low-tech activity using maps, pens and paper but the public definitely learned more about the topic. Appearing in the Imperial College Podcast helped me to promote the activity.



# Bahvna Patel

## Putting CO<sub>2</sub> in its place!

My aim is to visit local primary schools with our current activity spending half day with the students aged between 8 - 11 (year 4 – 6) explaining the importance of Carbon Capture and Storage, using various home products to explain the process of each activity. The aim would be for the students to go home and talk to parents/peers about the process, make their parents walk to school rather than bring the car! Spread the word!



## Sara West

### Video Series

I will be creating a series of short videos where chemical engineers talk about what they do in easy-to-understand terms. These will be aimed at school-age children, particularly those aged 11 and over, who will be thinking about what they'd like to study and potentially the career they'd like to follow, to inspire them give them a sense of what chemical engineering is.





## Philip Anyanwu

### Stakeholder Workshop

My project is a stakeholders' workshop that aims to explore the implementation of interventions or strategies regarding antimicrobial stewardship as part of the quality premium in general practices in England. The workshop is part of a study investigating the mechanism of impact of the quality premium initiative on antibiotic prescribing in primary care practices in England. The workshop will involve a discussion forum and an interactive activity that will allow participants to share their views and experiences on antimicrobial stewardship interventions and any work that has been carried out at their local practices in connection to antibiotic prescribing before and after the quality premium.



# Maria Parkes

## Osteoarthritis Demo

Osteoarthritis affects around 1/3 of people aged 45 and over in the UK making everyday tasks such as going up stairs or making a cup of tea difficult and painful.

My event will be a demo day bringing patients and researchers working on treatments for Osteoarthritis together. Researchers will be describing the latest advances in diagnostics, rehabilitation technologies and treatments for Osteoarthritis. Patients will be able to question the researchers about their experiments and give feedback on our proposed technologies, the barriers/problems with current treatments and be able to sign up to future trials.



# Anandha Gopalan

## Discover Computing

Computer science is going through a golden period, but there is a lack of students actually studying it. Even though the new GCSE curriculum started in 2014, the numbers taking are still low and one of the primary reasons is a lack of understanding about the subject.

We aim to provide students (and family) from under-represented minorities an insight into Computing to pique their interest towards pursuing it for their studies. A half-day workshop will consist of interactive and practical activities that would allow children and parents to participate together in order to mutually appreciate the subject.



# Claire Thompson & Sabine van Elstrand

## Infectious Disease and Mathematical Modelling

We have worked together to prepare a series of activities to share the work of the MRC Centre for Global Infectious Disease Analysis (GIDA) and the NIHR Health Protection Research Unit in Modelling Methodology with the public. Activities will be delivered at the MRC and Great Exhibition Road (GER) Festivals in June 2019, and include a schools outreach programme for female secondary school students, festival stalls with activities for children, Excite zone, GER Festival and an infectious disease-themed evening panel discussion for adults.



## Alekos Simoni YouTube Channel

The idea is to open a YouTube video channel (and dedicated Facebook/social media page) about science, with a focus on great ideas of biology, current discovery affairs and a deep focus on genetic modification (GM) technologies (the latter being my research expertise).

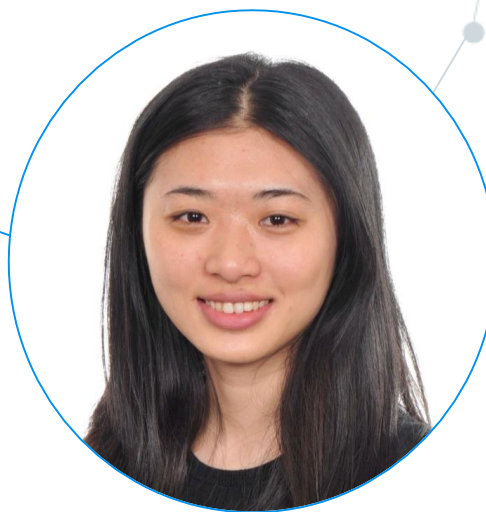
This is a BIG idea, and it will take quite some time to get it out. It is not something I would like to carry on by myself. I am looking for partners. My plan at this stage is to target it to the Italian audience (this may change. So the videos will be in Italian).



# Geraldine Torin Ollarves

## The Green Chill Project

“The Green Chill Project” aims to raise awareness and educate young adults about the climate change impact of currently utilised refrigerants and the need for new “greener” refrigerants to be rapidly deployed. As part of the project an exhibition will display various related media, including a fun practical activity that aims to highlight to the audience the individual equivalent CO<sub>2</sub>/greenhouse gas emissions of different appliances in the kitchen. The effect of refrigerants, used in our fridges or air conditioners, on the environment and the need for research on new refrigerants without negative effects on the planetary health



## Xiaolei Zhang

### Science Event Finder

I want to help people to search science events more easily. The current event finder websites are not well-developed for science events. There isn't a web platform to collect the science events inclusively and specifically. People may need to go through the websites of interests or subscribe to their newsletter (if it exists). My engagement project is to build a user-friendly event-finder website with customized search function. It would not only help science fans save time and money to find out interesting science events but also help increasing the attendance of science events. Currently it is under active development.



# Marta Ciechonska

## Science Info Board

My science engagement activity will take place in my local community of Peckham. The main idea is to build and install a large science info board in a public space at Peckham Levels, targeting adults who do not generally visit science learning sites or attend science festivals. The first board will focus on describing, in a graphic format, DNA, genes, their regulation and editing. I will then work with this community to determine the topic of the next info board and begin to develop a science learning community in this space.





# Benjamin Maunder

## Volcanoes

Ben is currently organising an evening of volcano related talks and hands on activities in a South London pub as part of the Pint of Science festival in May. He is also in the middle of putting together a small science stand (based on a successful Imperial Festival stand from last year!) to take to music festivals, along with a small team. The stand gets its first outing at Bluedot festival near Manchester at the end of July.