

09:00 (Monday 19 November)

09:00 - 10:00

## Registration

10:00 (Monday 19 November)

10:00 - 11:15

## Session one

10:00 - (S001) **Synthetic Protobiology**

10:45 Stephen Mann - *University of Bristol, United Kingdom*

10:45 - (OC001) **Machine learning optimisation of gene construct topology for rapid, cell-free protein synthesis**

11:00 Alice Banks - *Newcastle University, United Kingdom*

11:00 - (OC002) **Sunlight-driven biocatalytic conversion of CO2 into fuels and chemicals in photosynthetic microorganisms**

11:15 Ian Sofian Yunus - *Imperial College London, United Kingdom*

11:15 (Monday 19 November)

11:15 - 11:45

## Refreshment break

11:45 (Monday 19 November)

11:45 - 12:45

## Session two

11:45 - 12:00 (OC004) **Development and improvement of biosensors via bacteriophage directed evolution**  
Eduardo Goicoechea - *University of Warwick, United Kingdom*

12:00 - 12:15 (OC005) **Engineering electroactive bacteria**  
Robert Bradley - *Imperial College London*

12:15 - 12:45 (S002) **Re-Engineering the Triple Helix: beyond the banality of innovation**  
Richard Owen - *University of Bristol, United Kingdom*

12:45 (Monday 19 November)

12:45 - 13:45

## Lunch

13:45 (Monday 19 November)

13:45 - 15:30

## Session three

13:45 - (S003) **Finding drugs in the garden**

14:15 Anne Osbourn - *John Innes Centre, United Kingdom*

14:15 - (OC006) **Combining TAR cloning and CRISPR/Cas9 editing for the discovery of natural products from silent bacterial gene clusters**

14:30 Christophe Corre - *University of Warwick, United Kingdom*

14:30 - (OC007) **Economic Manufacture of Peptides for Non-Therapeutic Applications**

14:45 Martin Challand - *Zentraxa Limited, United Kingdom*

14:45 - (OC008) **clusterTools: functional element identification for the in silico prioritization of biosynthetic gene clusters**

15:00 Emmanuel Lorenzo de los Santos - *Warwick Integrative Synthetic Biology Centre, United Kingdom*

15:00 - (S010) **Synthetic Proteins for Synthetic Biology**

15:30 Lynne Regan - *University of Edinburgh, United Kingdom*

15:30 (Monday 19 November)

15:30 - 16:00

## Refreshment break

16:00 (Monday 19 November)

16:00 - 17:30

## Session four

16:00 - (OC009) **The genome design suite: utilising high-performance computing facilities, bioinformatics and data science to discover and understand in-silico minimal genomes.**  
Oliver Chalkley - *University of Bristol, United Kingdom*

16:15 - (OC010) **Decoding Plant-infecting Viruses and Bacteria to Inform the Rational Design of Synthetic Regulatory Elements for Plants**  
Yaomin Cai - *Earlham Institute, United Kingdom*

16:30 - (OC011) **Automating the design of genetic circuits using modular and composable models of biological parts**  
Goksel Misirli - *Keele University, United Kingdom*

16:45 - (S005) **Nature-inspired Polymer Synthesis**  
17:30 Tanja Weil - *Max Planck Institute for Polymer Research, Germany*

17:30 (Monday 19 November)

17:30 - 18:30

### **Poster session 1**

Posters 1 - 64

19:30 (Monday 19 November)

19:30 - 21:00

### **Conference dinner**

09:00 (Tuesday 20 November)

09:00 - 10:45

### **Session five**

09:00 - (S006) **Future Perspectives for Genome Editing in Bioproduction**  
09:45 Lorenz Mayr - *GE Healthcare Life Sciences, United Kingdom*

09:45 - (S007) **Cellulose adsorbent media to capture micropollutants in water**  
10:15 Amanda You - *CustoMem Ltd, United Kingdom*

10:15 - (OC012) **Panel Proposal:Responsible innovation in the emerging synthetic biology industry: challenges, possibilities, implicationsProposal includes 7 abstracts.**  
10:45 Achim Rosemann - *University of Exeter*

10:45 (Tuesday 20 November)

10:45 - 11:15

### **Refreshment break**

11:15 (Tuesday 20 November)

11:15 - 12:45

### **Session six**

11:15 - (S008) **Buckling of epithelium growing under spherical confinement**  
11:45 Aurelien Roux - *University of Geneva, Switzerland*

11:45 - (OC013) **Surface sensing metabolic protocells**  
12:00 Angelique Coutable-Pennarun - *University of Bristol, United Kingdom*

12:00 - (OC014) **Reporter systems for metabolic load and stress in *Bacillus subtilis* and *Escherichia Coli***  
12:15 Wendy Smith - *Newcastle University*

12:15 - (S009) **Towards a complete and quantitative view of genetic circuit function**  
12:45 Thomas Gorochowski - *University of Bristol, United Kingdom*

12:45 (Tuesday 20 November)

12:45 - 13:45

### **Lunch**

13:45 (Tuesday 20 November)

13:45 - 14:45

### **Session seven**

13:45 - (S004) **Applications of Synthetic Biology in Metabolic Engineering**

14:15 Brian Pflieger - *University of Wisconsin-Madison, United States*

14:15 - (OC015) **Mosaic polymers of the plague capsular antigen (Caf1) protein: engineering a multi-**

14:30 **functional biomaterial**

Daniel Peters - *Newcastle University, United Kingdom*

14:30 - (OC016) **Barrel-Array Diagnostics and Sensing: A New Paradigm for Analysing Complex**

14:45 **Biological Mixtures.**

Jordan Fletcher - *University of Bristol, United Kingdom*

14:45 (Tuesday 20 November)

14:45 - 15:45

## **Poster session 2**

Posters 65 - 124

15:45 (Tuesday 20 November)

15:45 - 16:45

## **Session eight**

15:45 - (OC017) **Unravelling the role of  $\beta$ -catenin dynamics in mouse embryonic stem cell (mESC)**

16:00 **identity**

Elisa Pedone - *University of Bristol, United Kingdom*

16:00 - (S011) **Matter to Life: Assembly of Synthetic Cells**

16:45 Joachim Spatz - *Max Planck Institute for Medical Research, Germany*

16:45 (Tuesday 20 November)

16:45 - 17:00

**Concluding remarks and meeting close**