




GW4 Cytometry Computing Workshop

Provisional Programme

Day 1 (28th July) 09:30 am – 18:00 pm

The Forum, University Of Exeter, Streatham Campus, Exeter EX4 4RN

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| 09:00 | <i>Arrival and registration</i> |
| 09:30 | Workshop overview |
| 09:45 | Introduction to programming in R |
| 11:30 | <i>Coffee, Tea, Pastries</i> |
| 12:00 | Practical Cytometry Analysis 1 <ul style="list-style-type: none">▪ Data preprocessing, quality control▪ Introduction to data visualization |
| 13:30 | <i>Lunch with networking</i> |
| 14:30 | Practical Cytometry Analysis 2 <ul style="list-style-type: none">▪ Manual cell population identification▪ Automated gating solutions 1 |
| 16:00 | <i>Coffee, Tea, Pastries</i> |
| 16:30 | Practical Cytometry Analysis 3 <ul style="list-style-type: none">▪ Statistical hypotheses testing▪ Correlation analysis 1▪ Advanced visualization |
| 18:00 | Q&A |
| 18:30 | <i>BBQ at Devon and Exeter Squash Club</i> |




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Day 2 (29th July) 08:45 am – 16:45 pm

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- 08:45 **High-Parameter Analysis 1**
- Dimensionality reduction
 - PCA, UMAP and t-SNE
- 10:15 *Coffee, Tea, Pastries*
- 10:45 **High-Parameter Analysis 2**
- Correlations in a high-dimensional context
 - R packages for high-dimensional analysis
- 12:30 *Lunch with networking*
- 13:30 **Machine Learning Workflows 1**
- Automated gating solutions 2
- 15:00 *Devon Cream Tea*
- 15:30 **Machine Learning Workflows 2**
- Discovery analysis
- 16:30 *Concluding remarks*