

# Spatial transcriptomics data analysis: theory and practice

Dr SIMON J COCKELL  
ELEFTHERIOS (LEFTERIS) ZORMPAS

Biosciences Institute,  
Faculty of Medical Sciences,  
Newcastle University  
23/07/2023





# THE TEAM

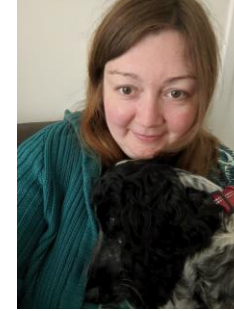
**Eleftherios Zormpas**



**Dr Simon J Cockell**



**Dr Rachel Queen**



**Prof. Alex Comber**



© ICBAM research group, Newcastle University, UK



**MRC DiMeN  
Doctoral Training  
Partnership<sup>2</sup>**



- **Describe and discuss core technologies** for spatial transcriptomics
- Make **use of key computational technologies** to process and analyse STx data
- **Apply an analysis strategy** to obtain derived results and data visualisations
- Appreciate the **principles underlying spatial data** analysis
- Understand some of the **methods available for spatial data** analysis
- **Apply** said **methods** to an example STx data set

- 09:00 – 10:45: Introduction to Spatial Transcriptomics (STx) (1h 45min)
  - Theory: 45min
  - Practise: 1h
- 10:45 – 11:00: Coffee break (15min)
- 11:00 – 13:00: Introduction to STx analysis methods (2h)
  - Theory: 30min
  - Practise: 1h 30min
- 13:00 – 14:00: Lunch break (1h)
- 14:00 – 16:00: Introduction to geocomputation for spatial data analysis (2h)
  - Theory: 45min
  - Practise: 1h 15min
- 16:00 – 16:15: Coffee break (15min)
- 16:15 – 18:00: Introduction to STx analysis with geocomputational methods (1h 45min)
  - Theory: 45min
  - Practise: 1h

AKNOWLEDGEMENTS

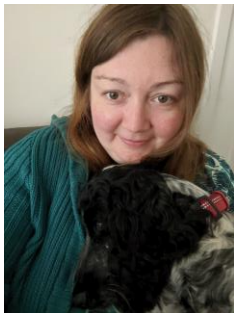
Eleftherios Zormpas



Dr Simon J Cockell



Dr Rachel Queen



Prof. Alex Comber



UNIVERSITY OF LEEDS

iSMB feedback form:



© ICBAM research group, Newcastle University, UK



Medical  
Research  
Council



MRC DiMeN  
Doctoral Training  
Partnership<sup>5</sup>