



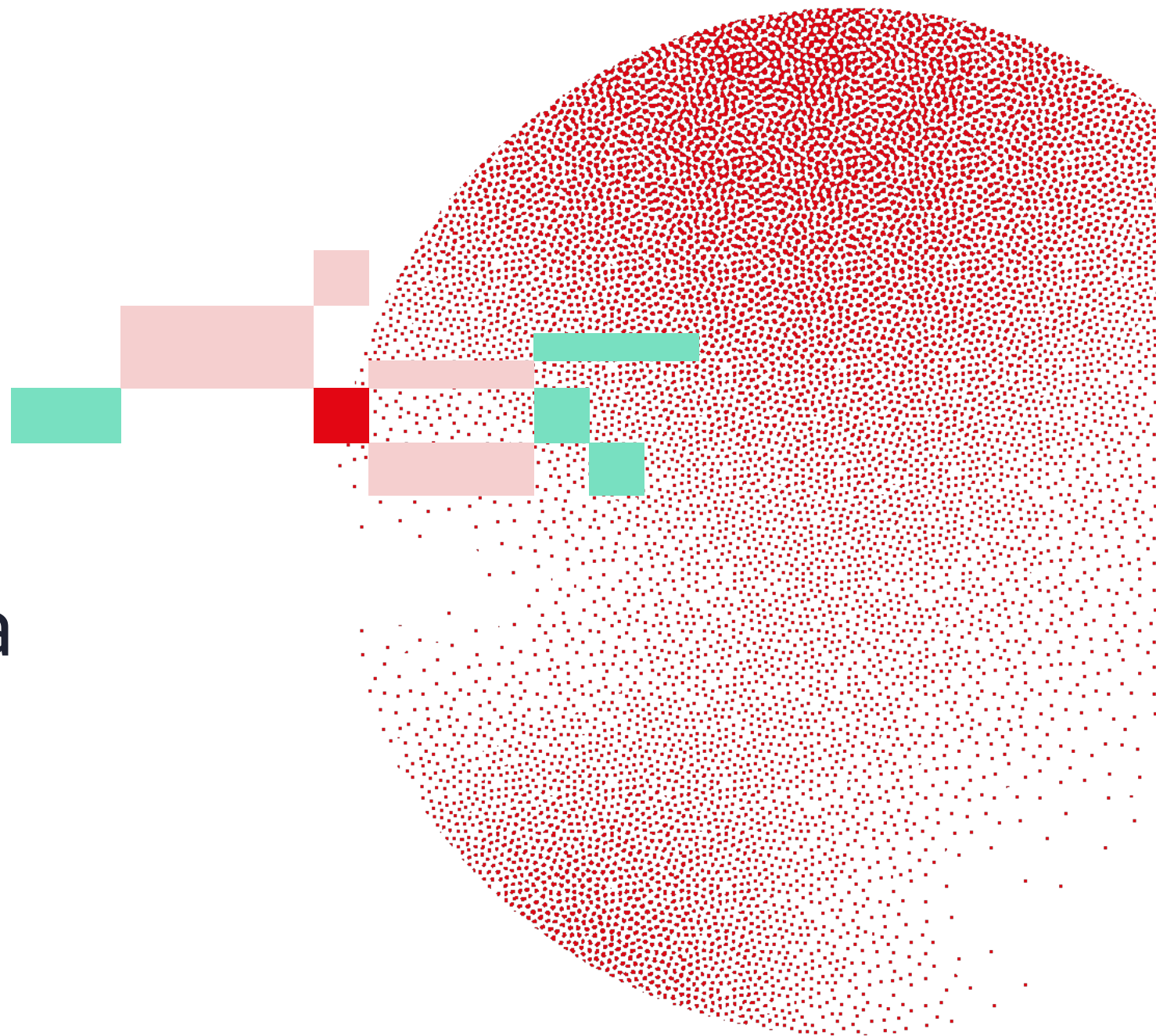
Swiss Institute of
Bioinformatics

SIB DAYS TUTORIAL

Analysis of spatial transcriptomics data

Geert van Geest

24.06.2024 SIB Days



Trainers

- ⌘ **Heidi Tschanz-Lischer:** staff scientist at Interfaculty Bioinformatics Unit (IBU) University of Bern
- ⌘ **David Ferreira Francisco:** staff scientist at IBU University of Bern
- ⌘ **Geert van Geest:** staff scientist at IBU University of Bern (50%) + bioinformatics trainer at SIB

Learning outcomes

- ⌘ **Understand** the general **concepts** behind the most-used **methods** to obtain spatial transcriptomics data
- ⌘ **Understand** the methods behind **10x Visium** and the resulting data in depth
- ⌘ **Perform quality control** on spatial transcriptomics data
- ⌘ **Perform dimensionality reduction** and **clustering** on spatial transcriptomics data
- ⌘ **Perform marker genes identification** and understand its biological meaning and limitations

Tutorial schedule

block	start	end	activities
block1	09:30	10:45	Lectures: welcome, introduction to spatial transcriptomics techniques, introduction to 10x visium
break	10:45	11:15	
block2	11:15	12:30	Exercises: Loading data, quality control and normalization
break	12:30	13:30	
block3	13:30	14:45	Lectures: Obtaining biological knowledge from spatial transcriptomics data (+ start on exercises)
break	14:45	15:15	
block4	15:15	16:30	Exercises: Dimensionality reduction, clustering, and marker genes identification

Introduction round

- ❖ What is your name?
- ❖ What do you do?
- ❖ Why are you joining this course?