DQBM Retreat

WORKSHOP PROGRAMME 2024

This booklet contains a short description of the workshops that you can sign up for. Participating in workshops is not mandatory. There are limited places available for each workshop. Everyone can only sign up for one workshop. Workshop places are going to be assigned on a first-come first served basis. Please sign up for the workshop of your preference until 16th February (23:59 CET) using the following link:
https://forms.gle/GQgLPt6PqvrEv6SW8

Workshop session 1: 9.00-10.15

Virtual Reality for Deep Learning

By Rami Al-Maskari (Menze Lab)

Deep Learning usually relies on annotated samples for training a model. In case your data is volumetric, shows novel behaviour or your biological model has not studied before in this context, it can be very hard to generate ground truth data for training and testing. This is where VR steps into the game: Here, you see your data as a whole and gain crucial spatial insights. From simple blob-like cell bodies to peripheral neurons spanning the whole body, you can annotate everything up to 15 times faster and analyze complex structures with ease!

Who is the workshop for?

- Biologists who work with volumetric datasets
- Deep Learning scientists looking for new annotated data
- People who never wore a VR headset but would really like to :wink:

What will be covered during the workshop?

- Basic principles of supervised learning
- Use cases of VR annotation
- Best practices of VR annotation
- Practical part - dive into VR yourself!

What to bring?

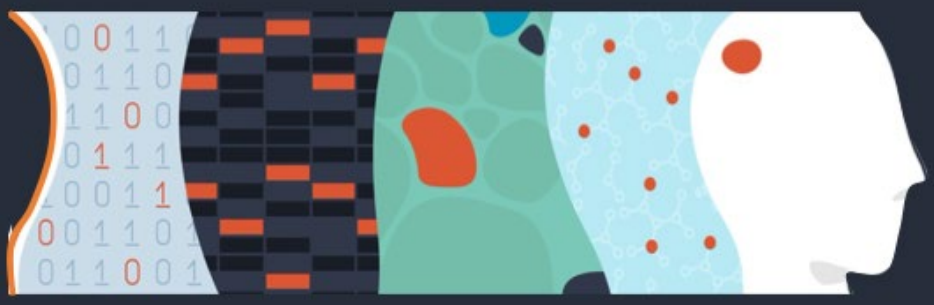
- Curiosity

Maximum number of participants:

- 20

COFFEE BREAK
10.15-10.30

DQBM Retreat



WORKSHOP PROGRAMME 2024

Workshop session 2: 9.00-10.15

Introduction to Biostatistical Analysis with R

By Rasha Boulos (Joller Lab)

Biostatistics has become an indispensable tool in scientific research in health-related fields, it plays an essential role in designing studies, analyzing data and creating methods to tackle research problems. This practical workshop will give an overview of the basic methods of statistical analysis. All the methods will be illustrated using examples or case studies in the statistical programming language R.

Who is the workshop for?

- Biologists who want to understand and use statistical analysis in their research
- People who want to have nice figures for their paper
- The workshop is designed at the beginner level. However, a basic R knowledge is much desired. A worksheet covering the essentials is provided before the workshop.

What will be covered?

- Data types
- Descriptive statistics
- Principles of inferential statistical analysis
- Practical applications in R

What to bring?

- Your laptop with R and RStudio installed
- The scripts/package installation instructions will be provided before the workshop.

Maximum number of participants:

- 25

COFFEE BREAK
10.15-10.30

DQBM Retreat

WORKSHOP PROGRAMME 2024

Workshop session 3: 9.00-10.15

Science Communication Workshop

By Ruchi Manglunia (Polymenidou Lab)

Science Communication is a new and upcoming field focusing on bringing science out of the labs and to the public. The pandemic also showed the world the importance of communicating science without giving wrong or diluted information. As science and technology advance, it becomes necessary that the public is also made aware of these advances! This where a Science Communicator steps in; they understand the science and research to communicate it in the simplest way to anyone who is curious to know.

Who is the workshop for?

- Anyone who has struggled to explain what they do to their non-scientist friends and family!

What will be covered during the workshop?

- Basic introduction of Science Communication
- Examples of Science Communication platforms
- Short hands-on SciComm activity

What to bring?

- Enthusiasm

Maximum number of participants:

- 10

COFFEE BREAK
10.15-10.30

Thank you for your interest.
We are looking forward to seeing you soon.