NORMENT
Norwegian Centre for
Mental Disorders Research

Genome-Wide Association Studies: Why, How and then What?

When: 4 days (22.03.2021 – 25.03.2021)
Time: Start time at 09:30, 3.5 – 4 hours per day (including breaks)
Place: Zoom

Day 1 – 22 March: Genome-wide association studies background and clinical implications.

09:30 – 09:45 General introduction and overview of projects in NORMENT. [Ole Andreassen]
09:45 – 10:45 Genes, genomes and genetic variation. [Timothy Hughes]
10.45 – 10:50 Break.
10:50 – 11:35 GWAS. Clinical implications. [Romain Icick]
11:35 – 12:05 Lunch Break.
12:05 – 13:30 Preparing for workshops. [Alexey Shadrin]

Day 2 – 23 March: Pre-GWAS: quality control and imputation.

10:00 – 10:45 Pre-imputation QC, imputation and post-imputation QC + *workshop* (part 1). [Elizabeth Corfield]
10:45 – 10:50 Break.
10:50 – 11:35 Pre-imputation QC, imputation and post-imputation QC + *workshop* (part 2). [Elizabeth Corfield]
11:35 – 12:05 Lunch Break.
12:05 – 13:00 Brain imaging and genetics. [Thomas Wolfers]

Day 3 – 24 March: GWAS essentials: association testing, annotation of the results and available resources.

09:30 – 10:30 Testing for association, meta-analysis and interpretation of the results + *workshop*. [Alexey Shadrin]
10:30 – 10:35 Break.
10:35 – 11:35 Survey of available GWAS data. Overview of TSD. [Oleksandr Frei]
11:35 – 12:05 Lunch Break.
12:05 – 12:50 FUMA, pathway and network analysis + *workshop*. [Shahram Bahrami]
12:50 – 13:35 Heritability concept and misconceptions. Genetic architecture beyond heritability. [Francesco Bettella]

Day 4 – 25 March: Post-GWAS analyses.

09:30 – 10:30 LD-score regression and genetic correlation + *workshop*. [Oleksandr Frei]
10:30 – 10:35 Break.
10:35 – 11:35 Polygenic risk scores + *workshop*. [Alexey Shadrin]
11:35 – 12:05 Lunch break.
12:05 – 12:50 Advanced polygenic prediction approaches. [Ehsan Motazedi]
12:50 – 13:35 Concluding remarks, discussion and distribution of examination tasks.