**Association Mapping: GWAS and Sequencing Data (SISG Module 15)**

July 25-27, 2022

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| **Monday, July 25th** |
| **Time** | **Topic** |
| 8:00am-9:30am | Introduction, Case Control Association Testing & Association Testing with Quantitative Traits |
| 10am-11:30am | Introduction to the PLINK Software for GWAS & Population Structure Inference |
| 12pm-1:30pm | GWAS in Samples with Structure & Introduction to the REGENIE Software |
| 1:45pm-2:30pm | Power, Sample Size & Design Considerations |
| **Tuesday, July 26th** |
| **Time** | **Topic** |
| 8:00am-9:30am | Downstream analyses: conditional analyses, colocalization & fine-mapping |
| 10am-11:30am | Downstream analyses: gene-based and pathways analysis & polygenic risk scores |
| 12pm-1:30pm | Rare Variant Analysis: Collapsing Tests, Kernel (Variance Component) Tests and Omnibus Tests |
| 1:45pm-2:30pm | Emerging issues showcasing ongoing research |
| **Wednesday, July 27th** |
| **Time** | **Topic** |
| 8:00am-9:30am | Beyond traditional GWAS: Variance QTL, Interaction Testing, GWAX, Time-to-event, Multi-trait analysis  |
| 10am-11:00am | Emerging Issues showcasing ongoing research |