



Course “From Omics Datasets to Biological Insight”

16-18 November 2022, Cape Town, South Africa

Wednesday 16 November

08:30 – 09:15 Arrival and Registration

09:15 – 09:45 Welcome to the ICGEB

Luiz Fernando Zerbini (ICGEB, Cape Town, South Africa)

09:45 – 10:15 Introduction to Data Analysis

Stefano Cacciatore (ICGEB, Cape Town, South Africa)

10:15 – 10:30 Coffee break

10:30 – 13:00 Transcriptomic techniques.

Tamiru Oljra Raga (Bio and Emerging Technology Institute, Addis Ababa, Ethiopia)

13:00 – 14:00 Lunch break

14:00 – 16:00 Trimmomatic transcript assembly (*de novo* or reference based)

Tamiru Oljra Raga (Bio and Emerging Technology Institute, Addis Ababa, Ethiopia)

16:00 – 18:00 Approaches of unsupervised learning.

Stefano Cacciatore (ICGEB, Cape Town, South Africa)

Thursday 17 November

08:45 – 10:45 Extent, impact and mitigation of batch effect.

Svitlana Tyekucheva (Harvard T.H. Chan School of Public Health, Boston, USA)

10:45 – 11:00 Coffee break

11:00 – 13:00 Gen set enrichment analysis.

Svitlana Tyekucheva (Harvard T.H. Chan School of Public Health, Boston, USA)

13:00 – 14:00 Lunch break

14:00 – 14:30 African history and population structure based on modern and ancient DNA inferences.

Carina Maria Schlebusch (Uppsala University, Uppsala, Sweden) **in streaming.**

14:30 – 18:00 Tools for population and evolutionary genetics analysis

Cesar Augusto Fortes Lima (Uppsala University, Uppsala, Sweden)

Friday 18 November

08:45 – 10:45 Point mutation analysis of liquid biopsy (cell free DNA) using ABEMUS

Alessandro Romanel (University of Trento, Trento, Italy) **in streaming.**

10:45 – 11:00 Coffee break

11:00 – 13:00 Network inference

Silvano Piazza (ICGEB, Trieste, Italy) **in streaming.**

13:00 – 14:00 Lunch break

14:00 – 14:30 Explore chemical similarity in metabolomic data.

Ebtesam Abdel-Shafy (ICGEB, Cape Town, South Africa)

14:30 – 16:30 Concepts of supervised learning

Stefano Cacciatore (ICGEB, Cape Town, South Africa)

16:30 – 18:00 Poster session

NOTE: Participants should have some coding experience