GMOS-Train Training Course

Statistical data analysis with the scripting language R (part 2)

TIMELINE:

February 14th – 18th 2022 (3:00 - 6:00 PM)

WELCOME TO JOIN!

Meeting ID: 929 3213 0149
Passcode: 976685
https://zoom.us/j/92932130149

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Statistical data analysis with the scripting language *R*

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1 Part one

1.1 Creating and handling data in R

- variables, arrays and matrices
- mathematical operations
- reading external data (csv, Excel)
- simple plots

1.2 General programming concepts

- loops (for, while, repeat)
- branching with "if" and conditional expressions
- functions in R

1.3 Simple statistics

- mean, median
- distributions (normal, log-normal)
- standard deviation

1.4 Testing

- Student's t-test
- F-test
- non-parametric tests

2 Part two

2.1 Linear correlation

- Pearson's correlation coefficient
- testing
- non-parametric

2.2 Timeseries

- Filtering
- Time series decomposition
- Auto correlation

2.3 Analysis of variance ANOVA

2.4 Principal Components Analysis PCA