Module Geomodelling for Natural Resource Evaluation
Exercise

Winter Semester 2024/2025

Instruction Exercise 4 (starting th of 8 January 2025) - Kriging

Work trough the R-script and try to understand what the R-code is doing and answer the questions in the script and explore the meuse dataset.

Perform a geostatistical analysis by your own for the testData123 set. Send me a short pdf document with your plots and the R-code and findings for the testData123 set until 31. January.

You have already answer the questions about the distribution of the data, outliers and other problems. Give the estimated variogram values, give the fitted variogram values and model. Please write which kriging method you have used and explain why.
Evaluate your kriging results with cross validation. Use therefore the leave-one-out cross validation function and give the standard deviation for this and explan your results.

Additionally: You have all seen in the explorative data analysis that the Co-values in left part of the area differs from those in the right part. I have spitted the data set in two parts with border x<1000m.
For x<1000m the data set name is testData_links123 and for x>=1000m the name of the data sets is testData_rechts123
Please calculate the variogram for those two data sets and compare it with the one for the whole area and perform kriging with those two parts and compare your results with the results for the complete area.

Hand in until 31. January 2025 over the Opal folder “Hand In/AssignmentExercise_Kriging”