

Assignment 5

This assignment is worth 40 points. Solutions should be submitted by 22.5.2022. Form groups of two students for this assignment until 15.5.2022.

Optimization

Write at least two optimization programs that solve the selected optimization functions. One of the approaches has to use local optimization and the other one must be based on population methods. You can use any programming language for implementation.

Write your results into the spread sheet available here (You can click on last "here", even if it is not visible in some pdf readers). Each group should fill its results as soon as it has them available so that peers can see what are currently the best obtained results by fellow students. Report best found objective function.

Write a report with your results and description of used approaches. Report should include results for each tested method separately and a short description of each method (around 1-2 pages per method). Submit your code, report, and txt file with solutions on e-ucilnica.

Final grade will be based on quality of results, quality of report, oral presentation, number of methods tested and code quality.

Continious optimization

The aim is to optimize the same 10 functions from homework 4 using your own methods. Again use the default bounds from the package **globalOptTests** in R. The C source of the function is available package documentation. Use `?goTest` and find the link toward the bottom of the help page.

Optimize the following functions.

- Schaffer1
- Schaffer2
- Salomon
- Griewank
- PriceTransistor
- Expo
- Modlangerman
- EMichalewicz
- Shekelfox5
- Schwefel

Reporting solutions

The online spreadsheet is available to report the best found value. You should also turn in a txt file with actual variables. Each line of the txt file should contain a solution for one problem. Each variable in line should be separated by tabulator. The order of problems must be the same as in online spreadsheet.