Rume documentation

# About

Rume is a program to calculate the cross section via a Ruthelde Simulation.

@Johan Extra info?

# How to run it

Usually Rume gets started by dragging task file to *task\_mill%1.bat*. Such task file has the following format:

A screen shot of a computer program

Description automatically generated

As you can see in the json, this task file requires two other files to be present in your working directory (where you ran the batch file). First *"RBS23\_227\_R01A\_d01.imec"* has to be present in a subdirectory called *“data”*. And *“sim\_input.json”* needs to be present in the directory of the batch file.

# The Code

Next let’s talk about what happens under the hood once you start this program. The very first thing is to start a Ruthelde server. That’s right, the Ruthelde Server is ran internally in python and will not be visible during the execution of the code. If you want to replace the Ruthelde version, head to *“rume\_package/Ruthelde\_Server.jar”*.

After this, files are being read and python will loop over the tasks. For each task, multiple ‘txt\_files’ are read (later replace to be *.imec* files) and a RutheldeSimulation is started. After this simulation, the result is logged into a csv file and both *aerial\_density* and *charge* is read and parsed to a second RutheldeSimulation. After that, the result is plotted in a cartesian and logarithmic plot. The Ruthelde Server gets terminated and the program is done.