

The Geneva library of distributed optimization algorithms

This presentation discusses the Geneva library -- an Open Source, general purpose framework for performing parametric optimization in parallel and distributed environments, such as GPGPU, Clusters, Grids and Clouds. It was recently extended with various new algorithms. In addition to evolutionary algorithms, Geneva now also supports particle swarm optimization, as well as gradient descents. Further algorithms are in the process of being added. The talk puts particular emphasis on the pros and cons of using different optimization algorithms in Grid- and Cloud- environments, and discusses practical use cases. Geneva was developed with kind support from Steinbuch Centre for Computing at Karlsruhe Institute of Technology, as well as the Helmholtz society of German research centres.

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