EVOLUTIONARY ALGORITHMS IN THE CLOUD

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The main objective of the tutorial is to familiarize the attendees with cloud computing concepts so that, by the end of the talk, they are able to use them in the design, development and eventual deployment of evolutionary algorithms or any other metaheuristic in the cloud.

Cloud computing includes a series of technologies that imply changes in the way applications are designed and built. In the case of evolutionary computing or other metaheuristics, we are mainly talking about distributed implementations of evolutionary algorithms, but the changes go deeper and will need probably changes in the shape and design of the algorithm itself. But, at the end of the day, this tutorial addresses scientific programming in the cloud, in general, using examples drawn from our own experience in evolutionary computation.

In this tutorial we will walk through the different technologies and methodologies involved with cloud computing showing with working examples how they can be applied to evolutionary algorithms. We will also talk about different cloud service providers and how they can be used, for free or a low price, for carrying out experiments in reproducible and thus more efficient way.