

Grid- and Cloud-based Model for Evaluation of Simulated Annealing Method for Distributed Software Engineering

Description of content and intended audience - the outcome you expect to achieve.

Many scientific grid and cloud computing applications helps to solve the problems of either the physical sciences or the life sciences. Only marginal part of all the applications is dedicated to other domains. Moreover IT and software engineering have a tiny (if any) piece even of this part. Our research focus is on the applications of the distributed infrastructures for the software engineering, including generative software development, modeling and optimization.

We do believe that such non-traditional application can be interesting to many participants especially to computer science and software engineering related ones. Our presentation can help to open more wide discussion on the place of Software engineering in distributed infrastructures context. We're expecting to find collaborators and potential partners.

Preferred Day if any (Demos - Mon, Tue, Wed)

May 20 (Tue)

Relevant URL (if any)

<http://ik.su.lt/~vaigie/socosys/>

Printable summary: this is the only section of the abstract that will be published in the Book of Abstracts.

We have proposed the method for optimal component set selection taking into account non-functional properties of components. This method have been used in the extended SoCoSys system and can be used as an extension of other proofs-as-programs methods and component-based software development systems. However the algorithm for the evaluation and improvement of the component set presents the class of algorithms. It is possible to change the possibility of global optimum detection of our optimization algorithm using different values of parameters α , β , T and g. In order to investigate the impact of the values of parameters we use massive computations using distributed computing infrastructures. In this presentation we introduce the model of using e-infrastructures in order to solve particular software engineering problem. We present our experience and the role and implementation-related issues working with ARC middleware and Windows Azure. This is one of examples of the applications from various domains covered by Lithuanian National Grid Initiative.

Primary author: Dr GIEDRIMAS, Vaidas (Siauliai University)

Co-author: Prof. SAKALAIUSKAS, Leonidas (Vilnius University)

Presenter: Dr GIEDRIMAS, Vaidas (Siauliai University)