Web services selection and composition is a new software development paradigm to achieve service oriented computing. QoS of compound service is a key factor for satisfying the users' needs. The services selection algorithm based on quality of services is a combinatorial optimization problem. For Web services selection for composition based on QoS, the optimization algorithms can solve it well. Genetic Algorithm and Gravitational Search Algorithm are proposed to solve this issue. In order to meet the QoS requirements of consumers, this paper presents the QoS calculation of non functional requirements such as cost, availability, reliability and execution time. To verify the effectiveness in latency of Web Services selection the above two algorithms are compared. Results indicate the Gravitational Search Algorithm improves the latency over the Genetic algorithm.
A Gravitational Search Algorithm for effective Web Service Selection for Composition with enhanced QoS in SOA

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**Index Terms**

Computer Science  
Information Sciences

**Keywords**

Ga  Gsa  Service Selection