**Effective Web Service Composition using Particle Swarm Optimization Algorithm**

**PAPER**

Effective Web Service Composition using Particle Swarm

Optimization Algorithm

**YEAR**

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**ALGORITHM:**

PSO ALGORITHM(PARTICLE SWARM OPTIMIZATION)

PSO BASE COMPOSITION ALGORITHM()

**ADV** The Particle Swarm Optimization algorithm is a

biologically inspired algorithm which simulates the overall

behavior of a swarm to find optimal solutions

The results showed that this approach was able to find suitable composition plans in a quick time.

The position of each particle in the search space represents a potential solution to the problem.

the large number of services available that provide the same functionality

**DIS**

Due to the navigation plan of particles in the search space this DOES not provides the best result

The high values in negative properties gives the lower quantity .

In this pattern execution of each component is non deterministic therefore to calculation the aggregate qos effect of this pattern the worst case should be calculated ..and worst case is always gives the worst solution

Response Time :Time between receiving request and

sending respond

Execution : Execution cost per request

Availability :

U p time/up time+down time

Reputation

TotalNumberOf Usage

ΣRep*i*

Successful

Execution Rate :Total Number of Request/ Numer of SuccessfulRequest

The Particle Swarm—Explosion, Stability, and

Convergence in a Multidimensional Complex Space

Author

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Year: **Date of Publication:** 07 August 2002

Algorithm

Particle swarm algorithm

Adv:

The search can be carried out by the speed of the particle

During the development of the several generations only the most optimist particle can transmit information onto the other particles , and the speed of the researches is very fast

The calculation of pso is very simple compared with other developing calculations it occupies the bigger optimization quality and it can be completed easily

Disadva

The disadvantages of particle swarm optimization (PSO) algorithm are that it is easy to fall into local optimum in high-dimensional space and has a low convergence rate in the iterative process.

This mehod does not work out for the problem of scattering and non coordinate system such as solution to the energy field and moving rules of the particles in the energy fields

Ths method easily suffers from the partial optimism which causes the less exact at the regulation of its speed and the direction

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | PAPER | YEAR | ALGORITHM | ADVANTAGES | DISADVANTAGE | | Effective Web Service Composition using Particle Swarm Optimization Algorithm | 2017 | Particle Swarm Optimization | The calculation of PSO is very simple compared with other developing calculations it occupies the bigger optimization quality and it can be completed easily | The disadvantages  of particle swarm  optimization (PSO) algorithm are that it is easy to fall into local optimum in  high-dimensional  space and has a  low convergence  rate in the  iterative process. | | QOS based Discovery and Ranking of Web Services | 2016 | QOS based computational algorithm | The system provides an effective Web service relevancy function that is used for ranking and finding most relevant Web services | It does not include  QOS as part of its  Publication or  Inquiry APIs. | | Optimization of Association Rule Mining Using Hybridized Artificial Bee Colony (ABC) with BAT Algorithm | 2015 | Aproiri and artificial bee colony algorithm with BAT algorithm is used | 1.This system optimizes the association rules  2.The rules generated is simple and comprehend | 1.This requires  many database  scans  2.Search space  limited by initial  solution | | The Particle Swarm—Explosion, Stability, and  Convergence in a Multidimensional Complex space | 2016 | Particle Swarm Algorithm | The position of each particle in the search space represents a potential solution to the problem. | The high values in  negative properties gives the lower quantity . | | A Framework for Efficient Discovery of Web  Services across Heterogeneous Registries | 2007 | METEOR-S | 1.)The WSRB provides metadata indexing support for all web service description across heterogeneous registry  2.) The WSRB  provides a cached searchable information. | These solutions do not provide an effective discovery mechanism when querying multiple service  registries, and offer no support for heterogeneous registry  environments. | | A Peer-to-Peer Framework for Web Service Discovery with Ranking | 2004 | Hashing Technique | 1.)Web service discovery method that considers both the functionality and the  behavior of the Web services, while providing a scalable  reputation model for ranking the discovered services. | 1.)centralized approaches  to service discovery suffer from problems such as  high operational and maintenance cost, single point of failure,  and scalability.  2.)Another issue that has not been considered  in current Web service discovery paradigms is the issue  of trust and quality of service of the service provider. | |