

**evoapplications\***

**25th European Conference  
on the Applications of Evolutionary  
and bio-inspired Computation**

part of **evo\* 2023**

[www.evostar.org](http://www.evostar.org)

Beville, Ceará, Brazil

20–24 April 2023

**evoapps\***

special session on

# Evolutionary Computation in Edge, Fog, and Cloud Computing

**evo\***  
2023

Recent years have witnessed an increasing demand for Edge and Fog computing paradigms with the emergence of Internet-of-Things (IoT). Cloud computing based on the pay-as-you-go concept has been considered a computing paradigm to provide different services remotely via the internet. Due to the existing limitations associated with the transfer of the sheer volume of data generated by IoT devices to the cloud, Edge, and Fog computing paradigms have emerged to get data processed closer to the generation sources. Edge and Fog computing has been extensively recognised as promising solutions to meet the requirements of low latency and energy efficiency.

This emerging computing paradigm has been facing various optimisation challenges and complicated problems as well. Computational intelligence such as Evolutionary Computation (EC) could offer intelligent solutions to the new computing environments and their real-world applications to meet the optimisation challenges. The development of novel EC techniques for Cloud, Fog, and Edge computing has recently attracted a substantial amount of attention from academia and industry. This special session aims to solve different problems in the scope of Cloud, Fog, and Edge computing using EC techniques, covering all different evolutionary computation paradigms such as Genetic Algorithms (GAs), Genetic Programming (GP), Evolutionary Programming (EP), Evolution Strategies (ES), Memetic Algorithms (MAs), Particle Swarm Optimization (PSO), Ant Colony Optimization (ACO), Differential Evolution (DE), and Evolutionary Multi-objective Optimization (EMO).

Topics of interest include, but are not limited to:

- \* Evolutionary computation for scheduling in Cloud, Fog, and Edge environments
- \* Evolutionary computation for resource allocation optimisation
- \* Evolutionary computation for node discovery and sensor-near processing in Cloud, Fog, and Edge environments
- \* Evolutionary computation for pricing mechanisms in Cloud, Fog, and Edge environments
- \* Evolutionary computation for management of sustainable energy consumption
- \* Evolutionary computation for federated learning applications in Cloud, Fog, and Edge environments
- \* Hybrid algorithms between Evolutionary computation, neural networks, and fuzzy systems for Cloud, Fog, and Edge computing

**Submission deadline:** 1 November 2022

#### **Organizers**

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More info at:

[www.evostar.org/2023/evoapps/ecefcc](http://www.evostar.org/2023/evoapps/ecefcc)