

## Cloud Classification Optimization Using Particle Swarm Algorithm

**Authors :** Riffi Mohammed Amine

**Abstract :** Little droplets of liquid water or ice floating in the atmosphere, usually without reaching the ground, make up a cloud. Clouds are classified using a variety of techniques. The AI method known as particle swarm optimization (PSO), which was motivated by the collective behaviors of creatures that live in groups, such flocks of birds and schools of fish, is the subject of this article. a technique for approximating solutions to difficult classification and optimization issues. A set of MSG satellite-captured second-generation METOSAT photos were used to assess the suggested method. The obtained data show that the suggested approach produced outcomes that were satisfactory.

**Keywords :** remote sensing, particle swarm optimization, clouds, meteorological image

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