

*Overview of QUasi-Affine TRansformation
Evolutionary (QUATRE) Algorithm*
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QUasi-Affine TRansformation Evolutionary (QUATRE) algorithm is a swarm based algorithm and use quasi-affine transformation approach for evolution. This talk discusses the relation between QUATRE algorithm and other kinds of swarm based algorithms including Particle Swarm Optimization (PSO) variants and Differential Evolution (DE) variants. Several QUATRE variants are described in this talk. Comparisons and contrasts are made among the proposed QUATRE algorithm, state-of-the-art PSO variants and DE variants under several test functions. Experimental results show that the usefulness of the QUATRE algorithm not only on real-parameter optimization but also on large-scale optimization. Especially QUATRE algorithm can reduce the time complexity and also has the excellent performance not only on uni-modal functions, but also on multi-modal functions even on higher dimensional optimization problems.