

POINTWISE CONVERGENCE OF DISCRETE ANT SYSTEM ALGORITHM WITH PRACTICAL RESULTS

Summary - Discrete Ant System (DAS) algorithm, a modification of classical Ant System algorithm formulated by M. Dorigo, is presented. Definition of optimization problem and a detailed description of component rules of DAS method are given. Then a probabilistic algebraic model of DAS heuristic describing its evolution in terms of Markov chains is presented. The final outcome about a pointwise convergence of Discrete Ant System algorithm is established. In addition, preliminary practical results are introduced on the effectiveness of the DAS algorithm applied to the selected NP-complete problem.